OHIO STATE UNIVERSITY

MANUAL
AND
COURSE OF STUDY

HIGH SCHOOLS
Butler County, Ohio

January, 1919

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Chas. C. McCracken.

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INTRODUCTION

Faithful, loyal and intelligent co-operation of the teachers and district superintendents of the county has made this high school manual possible. For nearly five years this support has been steady and unstinted. The result is clearly seen in the continual growth of the high schools of the county both in scope and intensity. No other purpose has dominated the thought of all except the high one of a better and more efficient high school system.

It should not be forgotten, however, that the County Board of Education and every local Board of Education have been staunch and progressive supporters of every movement for the increase of the possibilities of a high school education for every boy and girl in the county. And it is interesting to know that within the past few years these possibilities have been actually realized, and in no part of the county is a high school education beyond the reach of the boys and girls. This condition has been brought about by some readjustments and the establishment of some new high schools.

Providing **places** for high school instruction is meeting only a portion of the responsibility; the **other** portion is the **kind** and **type.** In this latter regard the teacher's commission is definite; his duty must be discharged, not evaded. Scholarship and good method are absolutely essential. Superficial preparation is no longer tolerated. Approval of advance in both is given by the high school teachers themselves. Nor will this advance cease; it will continue in earnestness and vigor. Tomorrow will see better high schools and better prepared teachers; necessarily the result will be a better type of citizenship. The future therefore is attractive and the vision inspiring. Surely the teachers will not hesitate.

In the work for better high schools, it is hoped that this manual will be of assistance. An effort has been made to

suggest **principles,** and concrete illustrations have been given as to how these principles can be applied and involved. Nothing has been said for the sake of mere padding. Indeed, in some instances it might be found that the manual is too condensed and concentrated. This is more laudable than to add padding. Teachers can in this case continue to discover new meanings and new relations as the study of it through the years is made. Note the term study is used; this precludes superficial reading. Often one mere sentence, properly interpreted, can be made the guide for many, many recitations. He sees most in a manual who is looking for most.

It follows therefore that method and content as indicated in this manual must be made the basis for future work. There can be no occasion for failure to know what this method and content is. There will therefore be possible a common understanding, a common vocabulary and a common aim.

In no instance must it be thought that any manual can supplant the teacher's own thinking. It may stimulate such thinking, but whether the mental activity of the teacher continues will be determined only by his own attitude and inclination. The teacher's use of a manual often indicates his vision and educational philosophy.

The experiences of the past years give hope of future continued co-operation. The teachers and district superintendents must bear a large share of the responsibility and of the credit for success in educational affairs of the county. Their training and ability have materially aided in the construction of this manual; its use in the school work must also lie largely in their hands. The coming years will indicate what will be the measure of success attending its publication.

JOHN SCHWARZ,

County Superintendent of Schools.

Hamilton, Ohio, January 1, 1919.

MISCELLANEOUS ITEMS

Under this head a number of things will be suggested and enumerated but not fully discussed. Thoughtfulness on the part of the teachers will determine the value of the items.

PROFESSIONAL READING

No teacher's mental equipment will ever be complete. Always will exist the necessity for improvement. The following books should be in the possession of every teacher and will form the basis of the educational philosophy of the work of the county:

Earhart — Types of Teaching — Houghton.
Judd — Psychology of High-School Subjects — Ginn.
Parker — Methods of Teaching in High Schools — Ginn.
Monroe — Principles of Secondary Education — Macmillan.
Dewey — Democracy and Education — Macmillan.

In many instances references have been given after special subjects. These concern the teaching of the special subject which they follow. The books listed above discuss general method and general philosophy and with the special books listed throughout this manual form a working library. In every case not the number of books but the quality has guided in selection. Every book listed should be purchased.

KEY TO COMPANIES

American Book Company, Cincinnati, Ohio.
American Sheep Breeder Co., Chicago, Ill.
Bowman & Crossley, Ames, Ia.
Doubleday, Page & Co., New York, N. Y.
Ginn — Ginn & Co., Columbus, Ohio.
Heath — D. C. Heath & Co., Chicago, Ill.
Henry Holt — Henry Holt & Co., Chicago, Ill.
Houghton — Houghton Mifflin Co., Chicago, Ill.
Kenyon Printing Co., Des Moines, Ia.
Longmans — Longmans, Green & Co., Chicago, Ill.
Macmillan — The Macmillan Co., Chicago, Ill.

Orange Judd Co., 315 Fourth Ave., New York, N. Y.
Radford Architectural Co., Chicago, Ill.
Rand — Rand, McNally & Co., Chicago, Ill.
Sanders Pub. Co., Chicago, Ill.
Scribners — Charles Scribner's Sons, Chicago, Ill.
Sturgis & Walton, New York, N. Y.
Torch Press, Cedar Rapids, Ia.
D. Van Nostrand Co., 23 Murray St., New York, N. Y.
J. A. Vye, 1449 Cleveland Ave., St. Paul, Minn.
Webb Pub. Co., St. Paul, Minn.
Whitcomb & Barrows, Boston, Mass.
John Wiley & Sons, New York, N. Y.

ALTERNATION

This is discussed at length in Manual and Course of Study for Elementary Schools, pages 13-15. Every high school teacher should read what is there said. Alternation is applicable to the work of the high school, though the State Department of Education indicates what subjects may be alternated. Teachers should plan for this. Consult your district superintendent concerning it.

DISCIPLINE

In any high school the teacher is the most important person regarding discipline. Not a tyrant ruling by fear, but a human being, dignified, respected, and obeyed; kindly disposed, yet not sentimental nor patronizing; unyielding in firmness, exacting in requirements, yet so clearly just that even the most obstreperous pupil recognizes the "square deal;" such a teacher rarely has a problem in discipline.

Complete understanding and harmony should exist between teachers and principal. The school organization thus will be so rigid, so systematized, so carefully planned that no invitation for disobedience and disorder is given to the pupils. The exemplification of courage, fearlessness, and promptness in the principal's dealing with matters of discipline will soon be recognized and understood. Under such conditions there should be no occasion for difficulties in discipline in the high school. Whatever is demanded will be secured; conversely, if good discipline is not obtained, the conclusion is that sufficient is not demanded.

SCIENCE

Aim — We are living in a time which may well be called the Age of Science. It does not take much reflection to see that our present stage in the progress of civilization is due in no small measure to contributions from science. Not only do we realize this in respect to those agencies that make for the common good of mankind, as improved methods of transportation, the germ theory of disease, etc., but also in respect to every-day living. Practically every vocation has received in its turn contributions from science. It is of great importance then that the study of science find a place in the high school in order that we may add to the next generation that rich inheritance which is responsible to a great extent for the progress of the race.

Its study should not only impart a knowledge and appreciation of what has been achieved thus far but also should give to our boys and girls a spirit of science that they may live a fuller and richer life and do their bit as members of society to further progress in general. Putting this into definite statements, we may say that our general aims for instruction in science may be given under two general groups:

1. To give to pupils a knowledge of science which will enable them to appreciate its meaning and value as a factor in civilization.
2. To give the pupils a knowledge of and to some extent a working ability in the scientific spirit.

Now these are very general aims as well as ultimate aims. To realize them it is necessary to have before us more approximate aims. Some of the more important of these may be set forth as follows:

1. To give to pupils a large group of scientific facts which are of human significance.
2. To give training in the forming of judgments which are made up from the data at hand.
3. The appreciation of unity, adaptation, economy, order, and system as set forth by scientific procedure.
4. Acquisition of accuracy and method in recording data.

5. Some training in careful accurate methods of measurements.
6. Training in the manipulation of apparatus.
7. Training in and appreciation of system, order, and neatness in observation and experimental work.
8. Formation of some useful specific habits — through training, routine, and rationalized practices.
9. The adoption of useful ideals.
10. To help high school pupils to perform better those desirable activities which they will perform anyhow.

Material — If the science work of the school is to function in the lives of the pupils, it is quite important that the material used in the class be such that the pupils think it worth while to study and of such degree of simplicity that they can realize results from their study.

We grant that there is in each separate science a pretty well defined content. There are two ways of using this. One way is to allow the pupils to memorize the important parts of this content and thereby deceive themselves as to its educational value. Another way is to adapt this same content to the environment and experience of the pupils and thus not only cover the conventional content but do it in a way which educates and develops.

The text book in a science can only at its best be a guide, a reference, a hand book. Texts in science for the most part are answers to problems, results which some one has found to be true by experiment. If this be true it is absurd to teach any science by sticking to the text. With the understanding then that the material in science is to furnish the means by which the pupils reach the generalizations in the text book, the following sources of material are cited:

1. Adopted texts.
2. Parallel reading on specific topics.
3. Pamphlets describing some machine, or organism, or explaining some process.
4. Government bulletins.
5. Newspapers and magazine articles.

6. Lantern slides and charts.
7. Demonstrations.
8. Observation trips definitely planned.
9. Pictures, diagrams, blue prints, etc.
10. Problems and projects which present themselves to the scientific class for solution, as for example:
    a. Seasonal agricultural problems — analysis of clover seed for farmer in community; testing seed corn.
    b. Cleaning and repairing:
        I. School sewing machines.
        II. Sewing machines for community.
    c. Construction:
        I. Electric bell system for school building.
        II. Disinfecting school house and homes.

These and many more could be given to show that opportunities are many for making science in the high school practical as well as educative.

Although it has not been stated in so many words, the general spirit of the discussion would indicate that science should be handled from the practical standpoint to no small extent.

Method — The aims set forth above can only be realized by a correct procedure. Enough has been said already to indicate that the way in which the text book is being used will serve to expose the teacher's general viewpoint in science. The impression must not be given that the use of the text book is to be slighted; emphasis is being placed on **manner** of use.

To speak in general terms, the business of the science teacher is to bring about in his pupils the problem-seeking and the problem-solving attitudes. This is no small task to accomplish. Yet every teacher can make improvement in this direction if he will acquaint himself with the manner of procedure and then earnestly set about to put it into practice in his classes.

Too much must not be expected at first. Many times have teachers said that their pupils do not like this method. This

assertion by the teacher is equivalent to self-acknowledgment of failure on his part. Certainly children will tend to be rational in their thinking. They solve problems on the school ground and in fact practically everywhere else save the school room. And again children will accommodate themselves to any reasonable type of recitation which the teacher demands. Of course it is possible to emphasize method to the extent that the work becomes rigid and lifeless. Only the most careless and inefficient teacher will do this.

Very important is the matter of selecting the correct place to begin a science course at the beginning of the year. When teachers reflect upon the great problem before them, and the responsibility upon them of guiding their pupils that they may develop educationally and especially scientifically, this matter of selecting a good place to begin becomes significant. Since most text books begin with definitions, results, and generalizations, this type of beginning is at once eliminated as pedagogically unsound. If the teacher will realize that the pupil is at the beginning of the course and he is at the end as far as knowledge and power of thinking are concerned, it may help in solving the problem. Begin science classes with concrete particulars. Be sure that the work is worth while to the pupil and he feels that it is so, and that the first lessons are well motivated. This type of beginning necessitates much planning on the part of the teacher in order that each lesson may fit into his general plan of work. But when teachers reflect that the children under their care are entitled by right of social inheritance to such teaching the task should be attacked with much vigor and earnestness and without hesitation.

The value of science to the high school pupils can be very seriously questioned if no practical applications are made by them. To realize the aims of science the practical side must be kept in view. Caution is here given that all applications should not be in fields of interest only to boys. Girls are entitled to science training just the same as boys and many fields can be found which are of special interest to the girls.

It is true that there will be a very distinct difference, ordinarily, between the things in which boys are interested and those which interest girls. But it is also true that boys and girls are in the same class and for the most part must be taught together. The teacher's task, therefore, is to find those problems

and projects in which are greatest interest and value common to both boys and girls. There will always be a difference in interest and value in a class of any kind and it must necessarily be true wherever **group instruction** must be given, even though the group be composed of boys alone or of girls only. Unless therefore it be possible to provide for two different types of science work for the two sexes, justice alone insists that selection of science work should be made with much care and thought. But ultimately it should be remembered that there is enough work in which both **will** be interested or **ought** to be interested.

Scientific thinking may be discussed under the following headings:

1. Location of a problem.
2. Reflections which will result in setting up one or more hypotheses.
3. Reasoning, observing, experimenting, etc., to prove or disprove these hypotheses and what they imply.
4. Conclusion — Generalization.

As was said above, one of the aims of the teacher in science is to bring about in his pupils the problem-seeking attitude. Pupils who study any science for any considerable length of time and develop no tendency to raise problems, are either guilty of sluggish thinking or of sitting at the feet of a poor instructor. But how can pupils raise problems unless they are so taught? Here lies the work of the teacher. The ability and skill of leading pupils into interesting fields of thought and of creating in them the desire to know and the desire to ask, is one of the prized virtues of a good teacher. Equally important also is that teacher's skill in keeping out of the way of the pupils and permitting them to do the greatest part of the talking and consequently their rightful share of the thinking.

After the problem has been selected and understood by the class, the next step is concerned with its solution. Here children only need to be allowed to be natural and to make use of their experiences in order to suggest possible solutions or topics of investigation or ways of attacking the problem. Here again the function of the teacher is that of guide. Many teachers have found it advantageous to write upon the blackboard the various topics to be considered in the solution of the problem. Good

pedagogy demands that these hypotheses come from the pupils and not from the teacher. Care must here be exercised that only those things which are pertinent to the solution of the problem be allowed to stand. Teachers will see that this particular work concerns itself quite often with the assignment of the lesson. Motivation, Initiative, Evaluation, and Organization are things to watch at this place.

Granting that we have a problem and an organization of material grouped about it, there remains the task of becoming familiar with the various topics concerned and applying this information on the solution of the problem. Much material coming under observation will need to be rejected on the ground of irrelevancy. At this point teachers often permit pupils to waste time. If the teacher will guide by some good questions having a tendency to develop thought relations, the pupils will readily see that what they are doing has or has not a direct bearing on the problem in hand.

Conclusions and generalizations should only come when sufficient concrete material has been assimilated on the part of the pupils to warrant them. The teacher must here stay in the background at all events. If conclusions and generalizations are truly made one's own, then **they** can rightly be used in deductive thinking. After forming a principle or a rule pupils may be permitted to check their result by referring to **statements in the text.** Such a method of using the text is highly to be commended. Texts so used then become really valuable.

Laboratory Work

Perhaps no part of the discussion of science is more vital to its successful teaching than that part which has to do with the laboratory. Close observation reveals that the common practice of science teachers is to run simultaneously two separate courses, one the recitation, based on the text; the other, the laboratory, based on some "fixed up" notebook. When one really considers the matter seriously many questions come to his mind for answer. What is the proper relation between the so-called recitation period and the laboratory period? Which should follow the other? How shall we do real teaching in the laboratory? Should we have individual work on the part of the class or group work or both? When shall the notes be written up? What shall be the content of these notes? How about drawings in notebooks?

Perhaps the relation of the laboratory work to that of the recitation can be explained in no better way than by saying that the pupils should go to the laboratory not to perform laboratory experiments taken from his notebook, but rather to help solve a problem already raised. To say the laboratory work should follow after several recitations have been devoted to a certain subject would not be proper. The reverse order is often best, The **relation** and not the **sequence** is the place for emphasis. It will be the business of the teacher to plan ahead how the text-book work, the recitation work, and the laboratory work are going to fit into each other.

The loose leaf notebook permits of better adaptation than any other form, but where teachers do not feel confident or able to use such a book the prepared form of notebook will be the next best to use. Even here there can be no excuse for working out in the laboratory pre-arranged, formal, unmotivated experiments. Perhaps an illustration will make a possible procedure clear.

Suppose the manual in Physics has an exercise for the laboratory on "Pulleys." The teacher, foreseeing this exercise, has so arranged his class room work that some definite problem is under discussion dealing with the subject of pulleys. It naturally would be concerned with the lifting of some object. The question as to just how it really would work out arises. The answer to this question can be found by going to the laboratory. The manual has an experiment on "Pulleys" and the pupils see a direct value to themselves in trying the experiment. Instead of entitling the experiment "Pulleys," the wording can be so arranged as to **involve** the particular characteristics of the class room problem under consideration.

What are the duties of the teacher in the laboratory? This is hard to answer in so many words, for existing conditions must determine this. One thing can be definitely agreed upon. Teachers are **not** to monopolize their own time in handing out apparatus. This type of work should have system to it, just the same as the lesson proper, and the time for getting ready to work be reduced to a minimum. Teachers will work out their own problems in this matter. It might be suggested, rather than to have too much time used in so handling apparatus, this work can be done by the teacher before class time or delegated to one or more members of the class.

Granting that the teacher has a definite plan in mind and that the work in the laboratory is only a part of this plan, the time of the teacher will be utilized accordingly. Real teaching is to be done. Proper questions, suggestions, demonstrations, are things to be used. Referring the pupil to other places for the answer to his questions is sometimes worth while. At all events avoid too much telling. It is true proper directions must be given in order to keep the pupil from wandering and never arriving at his solution. The right proportion must be maintained between instruction on the part of the teacher and independence on the part of the pupil.

Pupils are to stand on their own feet in the laboratory. One of the best ways to accomplish this is to demand individual work. This does not mean, however, that pupils are never to be permitted to work in groups. Some experiments require two or more working together for the best results. Often the lack of ample equipment will justify group work. The judgment of the teacher must here decide, always taking into consideration the value of the work on the **part of the pupil.**

Notebooks can be overemphasized and their educative value thereby lessened. It is well to keep in mind just why we need a notebook. In the earlier days of science the amount of laboratory work was comparatively small. In this case little use manifested itself for the notebooks. Today we believe that no science work in the high school is acceptable unless a good strong laboratory course accompanies the class room work. Certain conditions are purposely brought about in the laboratory and certain results follow. The pupils observe, measure, think, and record these results and perhaps description of the processes. It is strongly urged that the practice of making copious **rough notes** in the laboratory to be written up later in the **good notebook** be discouraged and in fact prevented. Pupils coming to the laboratory should have definite plans in mind. They should know the purpose of the experiment to be performed, the apparatus needed, how they are to manipulate this apparatus, and have some notion of what is liable to follow as results. Granting that the pupils have this work so arranged, it is suggested that they can have parts of the experiments written before entering the laboratory. If care be exercised in the planning and foreseeing of the **kind** of results which are likely to follow, the space for the tabulation of data and the conclusion can be easily prepared in advance.

The main points of the experiments and what really happened should be written up in the permanent notebook before leaving the laboratory.

Just what should be the content of the notes on any experiment is pretty generally established. The following form is suggested:

1. Statement of the aim.
2. Description of the apparatus.
3. Description of method of procedure, including drawing.
4. Data recorded — numerical and other results.
5. Calculations used in getting results.
6. Conclusions. Perhaps applications.
7. Source of error.

Enough has been said to indicate the importance of the aim of the experiment and its relation to the rest of the work. A word should be said about the matter of drawings in notebooks. What should be drawn? How? Why? At whose suggestion? Importance? A well described laboratory experiment should be the personal expression of the pupil doing the work. The matter then of what should be drawn in a particular exercise should come from the pupil. If he feels he can express himself better by a drawing than otherwise, he should so do it. If he feels that a graph expresses his ideas, he should feel free to use it. Drawings and graphs are to be considered means to ends and not ends in themselves. If at all possible drawings should be made direct from the object and not copied from books. It is suggested that a diagram is often easier made and better adapted to the ends for which it is intended than a free-hand sketch. The drawing should be analytical. That is, it should point out analytically in detail certain characteristics of the experiment which are of importance from the standpoint of scientific explanation. If a certain bird is being studied in the laboratory in a biology class, perhaps drawings of its beak and claws would be in line with the suggestions above. Insist upon the pupil's having a reason for making the drawing which he makes or, in other words, see that his drawing work is motivated.

In order to sum up the things said about the laboratory exercise the following are suggested as characteristics of good laboratory exercises:

1. They should help answer some questions in the solution of some problems significant to pupils.
2. They should have a direct relation with what precedes and with what follows in the course.
3. They should compel the pupils to reflect, to observe, to discriminate, and should develop in him skill in putting things up to nature.
4. No confusion should result from having too many things to watch at the same time.
5. Experiments must be capable of being done with a fair degree of accuracy.
6. They should also be comparatively easy of manipulation.
7. When possible, the experiment should be so run as to check against itself rather than have the pupil refer to his book as a check.

The amount of time devoted to laboratory work is relative. It is often stated that two days of laboratory work and three days of recitations are about the correct proportion. This may be considered the general rule, but each teacher must make his own schedule and adapt it to his own conditions.

Double periods are almost invaluable for laboratory work. In order to get the use of a double period in schools where the schedule is crowded the following suggestion is made. Suppose the schedule runs as follows: Physics, 1:15 - 2:00; Agriculture, 2:45 - 3:30. It will be observed that on days when a physics recitation is held, the period from 1:15 - 2:00 should be used and the time from 2:00 - 3:30 could be utilized for laboratory work in agriculture. Likewise on days when a recitation in agriculture is given, the period from 2:45 - 3:30 should be used and physics laboratory work can occupy the time from 1:15 - 2:45. This device saves time and prevents the necessity of having separate double periods for each science.

Demonstration work by the teacher is very valuable if rightly performed. There is a tendency sometimes to make this work spectacular at the expense of its real educative value. To say that this type of work should be real teaching just the same as the recitation proper, is giving it the right emphasis.

Teachers should not be content with an equipment in science which does not permit of a fair degree of satisfactory work being

done. Some system should be adopted by which apparatus is added each year. Breakage and depreciation make this necessary. Much can be done toward conserving equipment if a suitable place is provided for its storage. Teachers and pupils alike should take pride in this work.

Mention has been made that excursions are worth while in science work. The value of this type of work is proportional to the teacher's planning. Below are given a number of suggestions which indicate some main points to keep in mind when such work is undertaken:

1. Whenever these excursions are undertaken make them so interesting that pupils will really want to go.
2. It is absolutely necessary that the teacher go over the ground first.
3. A definite aim should be before the class and observations must bear a direct relation to the particular subject in hand.
4. An excursion is really a laboratory exercise. Treat it accordingly.
5. The discipline of pupils in such work should be at all times under control. It is often convenient to hold brief discussions in the field. This means that a perfect understanding must be had between the pupils and the teacher.

Adhere closely throughout the course to observations, measurements, and experiments. Permit laws, conclusions, and generalizations to come to the front only after proper data warrant them. Full discussion of the aim, material, and method of each of the sciences in high school given in the following pages.

Reference

Twiss — Science Teaching — Macmillan.

FIRST YEAR SCIENCE

Aim — The placing of science in the secondary curriculum is of comparatively recent date. The appearance of a course in general science in the ninth year is of still more recent date. Authorities are generally agreed that such a course is an improvement over a specific course in science, as physical geography, or botany, and if worked out under definite methods, controlled in turn by definite aims, will do much to start the pupil in the right way in his science work.

Pupils are naturally interested in many things about them that come under the heading of science. But it is safe to say that these interests are unscientific. The average high school pupil of the ninth year is not trained in the inductive search for the unknown. It is true that he has some ability in the solution of problems, gained from his elementary school course, but this is only a beginning. The teacher should gladly recognize and give credit for this work but should consider it as a basis for future development.

There is an interest in science which develops as a result of the natural sequence of things within the science itself regardless of the relation which such material bears to other sciences and to mankind in general. This is **not** the kind of interest with which we are concerned in this course.

Certainly there can be selected from the great mass of scientific data—facts, phenomena, experiments—certain material which not only interests the high school pupil but is of such significance that its assimilation will make for better citizenship. At all events must the work selected seem worth while to the pupil as he is doing it, not a work which will only function later providing certain conditions are fulfilled.

For illustration, suppose a boy is very much interested in airplanes. If he gathers together all the information he can upon the subject, evaluates it, organizes it and presents it to the class at a certain specified time, using diagrams, demonstrations, charts, etc., in his presentation, who will deny that this sort of work will not be capable, under proper supervision by the teacher, of developing within the pupil something of the scientific spirit? He is truly solving a problem of interest to himself and at the same time preparing himself to meet all

questions from his classmates. He is working rationally and is acquiring a method of work.

In the light of the above facts a summary of some of the things desired to be done will be of value both to the teacher in being definite and to the work in securing results:

1. To give information which is of human significance, not only to those who may continue in school but especially to those who go no farther.
2. To furnish training in the scientific method of procedure.
3. To show science in its broader meaning rather than confining the student to a single phase of science, and to reveal the relationship and dependence of the various sciences.
4. To serve as a means of exploration on the part of the teacher and pupil so that a wiser selection of science courses will follow.

Material — The quantity of material available for a course of this kind is large. The specific problem of the teacher here is not so much a matter of **collection** of material as that of **selection** of material. Inasmuch as a course in general science deals with the more common phenomena about us, the teacher should constantly be on his guard to keep the observational and experimental material down to the most simple things.

It is well for the teacher to look ahead through the year's work and become familiar with the content of the course as well as to have some idea of the relative amount of time to be given to each of the several larger topics. This procedure will prevent the class from finishing the course some months or so before the close of the term. It will also enable the teacher to develop more fully the various topics, with supplementary work as they come, rather than to place all the supplementary work at the close of the course. No class should feel that they have finished a course, if it be a year course, until the very last of the term. Anything less than this will not only work injury upon the pupil but will also reflect on the good judgment and ability of the teacher. The observer looks with curious suspicion upon the teacher whose stock of material is exhausted before the end of the year.

The broad field covered will demand that the material be not confined to books and the usual standard equipment of the

laboratory. The source of material must be broader than this. Excursions of course are one means of collecting valuable material. But each pupil must feel that he is responsible for some of the material and he should therefore be encouraged to bring to class whatever contributions he can. This need not be always in the form of specimens, but can well be clippings from newspapers, magazines, special reports, bulletins, and books. Contributions in the form of written or verbal reports upon personal observation have a place here.

The following will serve to indicate some of the more important sources of material:

1. Adopted text.
2. Parallel readings bearing on specific phases of the work.
3. Experimentation and demonstration.
4. Excursions in field, street, shops, manufacturing plants, museums, etc.
5. Magazines, papers, reports, pamphlets, bulletins, etc.
6. Lantern slides.
7. Borrowed collections.
8. Living things in natural environment.
9. Living things in school room.
10. Material preserved by the school.
11. Pictures.

Method — The subject of method at once refers us back to the aims. The teacher of general science will carefully note that this subject will give the opportunity to develop the scientific method. The pupils must now use a procedure which demands far more scientific method than they have heretofore used. Great responsibility rests here with the teacher. First of all must the teacher himself be sound on the matter, and, second, he must have the courage, disposition, and ability to realize this as an aim in his class.

There perhaps will be a tendency to go too far into the field of one particular science. This should be guarded against. It is not the purpose of the course to deal intensively with the material of physics, chemistry, physical geography, or any

other science but, on the other hand, to deal with phenomena which can be adapted to the needs, interests, and capacities of the children.

To say that the problem method is the best method of teaching this subject, will be merely a repetition of this idea which exists on many pages of this manual. What will be said, then, at this time will be a matter of emphasis.

The first business on the part of the teacher will be to bring about conditions so that the pupil will have a **real** desire to understand better the meaning and use of some experience, fact, or phenomena. Now this is not always an easy thing to do. To begin the study of a subject by assigning so much reading in the text book will seldom create this **real** desire. It is obvious that the teacher's part here lies in so arranging the approach that an interest is aroused. The teacher can always tell whether he has a vital problem before the class by the number and kind of questions asked by the pupils. It is only natural for adults as well as children to ask questions about things which are not understood but about which they have a desire to know more.

After a problem has been found and a **real** desire to solve it is manifested on the part of the pupils, then these pupils must have a firm faith that it is really worth while to work on the solution. Of course pupils will generally do as they are told by the teacher, but this is certainly not a rational procedure. This is another way of saying that the work may be motivated. Now the test of this step in the work is the enthusiasm with which the pupils work.

After a desire to solve the problem is created, and a faith in the importance of the work is realized, it only remains to proceed with the solution. This procedure consists in the gathering of data from experience, reading, demonstrations, experiments, etc., and applying it to the problems.

Care should be taken that the pupils close their solution of their problem with a feeling of having done their best. Also should they get the notion that the solution which they give may be only partial, even though they have exhausted all their powers in so doing. It would be absurd for pupils to feel that they had absolutely solved every problem which they worked upon and brought to a close.

Pupils at this time have very little knowledge of the proper content of the various divisions of science. On the other hand, the teacher has all of his information catalogued as it were under botany, zoology, chemistry, agriculture, etc. The teacher must watch this point. The logical arrangement of subject matter on the part of adults must not interfere with the psychological arrangement and procedure on the part of the child.

The more theoretical side of the work should be given only after many facts are in possession of the pupil and his experience will enable him to generalize.

Suppose the teacher desires to study the subject of variation as applied to plants and animals. Suppose further that the teacher desires the pupils to understand something about the operation of Mendel's law in nature. It is easy enough to approach this subject from the entirely theoretical standpoint. One way of doing this to avoid being merely abstract and theoretical would be to use an experiment at the beginning.

Have the pupils prepare 1000 grains of corn of nearly the same size. Half of these grains to be one color, say red, the other half another color, say white. Mix the two together and place in a container of some kind. Now allow the pupils to take turns in reaching into the mixture and withdrawing two grains. Pupils must not look into the vessel containing the grains.

Three vessels of equal size and shape, preferably cylindrical in shape, are now placed within reach. If the pupil draws two grains of, say, color red he places them in vessel No. 1. If he draws two white grains he places them in vessel No. 2. And again if he draws one white grain and one red grain, he places them in vessel No. 3. After all the grains have been drawn, notice the relative size of the three divisions. Count the grains in each vessel. If several experiments of this kind are being run simultaneously by the various members of the class or the experiment is repeated it will be found that the same ratio appears approximately each time. The larger the number of grains used the closer will be the result.

After seeing the law of probability and chance at work here the pupils can easily think in terms of plants and animals and better understand what the reading matter of the subject says.

Another experiment is suggested here to show how the class could approach the subject of variation in individual organisms.

Collect a hundred or more leaves of some one kind or a hundred catalpa fructifications or any other living specimen which can easily be measured. Perhaps the length in millimeters would be best. The larger the number measured the better will be the result. Now tabulate the results in order from the shortest to the longest. When a graph is constructed from this data the desired curve is obtained.

The teacher is here cautioned against allowing the course in general science to develop into a textbook course. It must have its periods for laboratory work just the same as the other sciences. The teacher must not forget that many habits are going to be formed in this course that will carry over into future science work. It is important then that care be given in every particular.

A large number of facts and topics will come to the teacher's mind since he has a broad view of science in general. Much of this is not valuable in this course. Rather it belongs to a more specific division of science. A good criterion for selection might be, Does it come within the environment of the pupil and has it any human significance to him?

Under the general discussion of science will be found much information which is directly applicable to general science. This should be carefully read and applied.

Due to many reasons, for the present the work in science for the first year is almost wholly biological in nature. The question might quite naturally arise therefore as to how science of a more general nature and wider scope might logically be given in a supplementary way. Some illustrations might be given.

In the study of plant life the subject of oxidation will come in its natural order and time. If the right method of instruction has been used the query will arise **on the part of the pupils** whether oxidation plays any part in the economy of life in relation to other things than merely to plants and animals. To the teacher who knows his subject, and the importance of oxidation in other relations, such a query on the part of the pupils will be welcomed indeed. He can easily satisfy the interest and curiosity of his pupils by finding applications near at home and perfectly familiar to the pupils.

Capillarity will be discussed. This furnishes an opportunity again to widen the applications of the topic. Evidence of it can

be seen in the operation of such a simple and common thing as the ordinary oil lamp. Perhaps when it is understood in this connection it will be an easier and more interesting task to keep the wick clean or to provide a new one and thus have a steadier light given.

In the discussion of osmosis of liquids it will be easy to take a broader view and establish the value and connection of osmosis of gases. Here again the home life makes a direct appeal. Pupils should know this action both as to the advantages and disadvantages.

The eye as an organ opens possibilities of a wider discussion of light and its action in relation to the common things of life and **not** from the point of view of the specialist in the subject of light. Such simple applications may be made, as the nature and shape of the lamp shade, the shade of the electric light in the home, the simple things about the camera, etc.

The question of sanitation, public and private, raises the question of disinfectants, insecticides, etc., and the simple facts of their operation. Interesting demonstrations of some of these may be given. Perhaps one of the easiest disinfectants and safest to operate is that made by a proper mixture of permanganate of potash and formaldehyde. Our communities should know more about such things.

Obviously from the above suggestions, the use of a text whose subject matter is mainly biological may easily be made the point of departure for excursions into the fields of many sciences, not with a desire to exhaust any one or all of them, but with a desire to make the world round about more intelligible and therefore a happier place in which to live. Indeed the easiest kind of relations can be established by the use of a biological text for the very reason that it does discuss living things. After all the lifeless and inorganic world exists for the sole use of the living and organic one.

Perhaps some question will arise concerning the completion of the text if such departures are made. Let it be said clearly once for all, the education and the development of the pupils are of far greater concern than the completion of any text or number of texts. Work done outside of the text as indicated above will certainly be credited in no less degree than work indicated in the text proper.

An enumeration of some common things with which logical relations might be established through the study of the first year science should be suggestive of other possible things:

1. Construction of simple lift pump and from what depth it will raise water.
2. Testing for purity of water.
3. Public and private sanitation.
4. Operation of the ordinary cook stove and gas or gasoline ranges.
5. Simple properties and actions of gas and gasoline.
6. Nature of spongy dough.
7. Care of shade trees, the garden, and grass.
8. Care of animals, those for pets and domestic uses.
9. Building an aquarium for the home.
10. Construction and operation of windmill.
11. Simple things to be done with rope and pulley.
12. Operation of bicycle pump and valves in the tires.

It should appear clear that all of the things enumerated above are common ones with which the pupils come in contact every day, and about which their curiosity and interest are aroused. Indeed if the teacher were always careful to inquire as to what pupils are naturally curious and in what they are interested, and then proceed to answer his own question, he would not need an enumeration of possible things. To satisfy the common curiosities and natural interests of pupils in their environment certainly is one of the fundamental purposes. Thinking in this direction will serve to enlighten teachers as to the legitimate fields of work.

AGRICULTURE

Aim — The fact that agriculture is a comparatively new subject in the public school curriculum emphasizes the necessity of having clearly in mind the specific things which should be accomplished in its study. To that end the following observations are made:

1. To develop agriculture as a productive occupation. From a public point of view this is the first and the greatest aim of teaching agriculture. With the passing of free land and the rapid increase of population, the public is concerned for its food supply. The population of the United States has doubled on the average every twenty-five years. Should this rate continue it is evident that the yield of the land under cultivation must materially increase. Agriculture colleges and experimental stations have worked out a body of knowledge and principles which when properly applied to farming will bring about the results desired. The rural high school is the logical agency to bring this material to the people.

2. To increase the wealth of the community. All progress in rural life must start at first with the movement of the financial conditions of the farmers. Increased production alone cannot bring about this increased wealth. Better business methods must be applied to farming. High school agriculture should seek to instruct its boys and girls in some of the business principles that are applicable to farming.

3. To lead the pupils to see the possibilities of country life. It is no longer necessary to move to town to get the comforts of a modern home. These conveniences cost but little more to install and less to maintain in the country than in the city. With a high school within easy access of every one in the country, and with the automobile on almost every farm, there should be no need to move from the farm for educational and social advantages. It is the duty of the rural high school to show how to make the best use of these and other agencies for the building up of a cultured, prosperous, and progressive rural population.

4. To give a sympathetic attitude toward agriculture and those engaged in its pursuit. The pupils should come to appre-

ciate the immensity of this occupation and to see the far-reaching possibilities and results in its relation to mankind.

5. To aid the pupils in selecting their life work. Too many men have become farmers who have had no especial fitness for it. Because of the newness of our country, and the richness of the soil, farming has been one of the easiest occupations in which to succeed. One who could not succeed at anything else could at least live by farming. But conditions are such that in the future only he who knows the science of agriculture and business methods will be able to succeed. The high school should give the student enough insight into the occupation to enable him to decide whether it would be advantageous for him to become a farmer.

6. To give the pupils a body of information and a training in scientific method that are essential to the cultured and cultivated mind. To the extent that the material of agriculture gives an intelligent view of the foundation of our national prosperity and creates a thoughtful attitude toward the future calling of the pupils, it is cultural in the highest degree. It certainly furnishes them a working vocabulary with which to read intelligently agricultural journals and official bulletins. When agriculture is properly taught it offers the opportunity for observation, evaluation, and the formation of judgments just the same as the other sciences.

7. To give an acquaintance with the environment. Butler County is one of the best agricultural counties in the state. It is well for the people of the towns to know the activities of the surrounding country. There is a continual mingling of town and rural people. They should know each other better. They should understand their mutual fundamental relations and dependence.

Material — There is such an abundance of material in this subject that one is sometimes confused in selecting that which is best suited for his purpose. And again agriculture is such a new school subject that educators have not yet decided just what material is the most profitable. It is agreed however that the following material is very valuable:

1. Of course the adopted text is the first source of material. No general text, however, contains enough material

on any one subject. It should be supplemented by material from other sources.

2. Publications of the United States Department of Agriculture. Every teacher of agriculture should see that the library contains the bulletins and circulars of this department on the subjects that are studied in school. The following will aid teachers in selecting the ones they desire:

Free Publications of Department of Agriculture Classified for Use of Teachers by D. J. Crosby and F. W. Howe, U. S. Department of Agriculture, office of Experiment Stations, Circular 94 (1910).

Circular 3, Division of Publications, contains a list of the publications that are for sale.

Publications, Monthly Circular 4, contains the list of titles of all new publications including reprints and revisions. This will be sent monthly to any one for the asking.

The Year Book of the Department of Agriculture can be secured, gratis, from your congressman.

Send to the State Experiment Stations for a list of the bulletins published by them. The following list of stations may be helpful:

Illinois — Urbana.

Indiana — Lafayette.

Kentucky — Lexington.

Maine — Orono.

Missouri — College Station, Columbia.

Minnesota — St. Anthony Park, St. Paul.

New York — State Station, Geneva; Cornell Station, Ithaca.

Ohio — Wooster.

Wisconsin — Madison.

The bulletins of Ohio State University, Columbus, will be sent regularly if the school is placed upon their mailing list.

3. Several good works on each of the subjects treated in the course should be in the school library. The following are recommended:

General Agriculture

Carver — Rural Economics — Ginn.
Coulter — Co-operation Among Farmers — Sturgis and Walton.
Davenport — Education for Efficiency — Heath.

Crops

Bowman and Crossley — Corn — Bowman and Crossley.
Burkett — Farm Crops—Orange Judd Co.
Coburn — Alfalfa — Orange Judd Co.
Doudlinger — Cereals in America — Orange Judd Co.
Hunt — Forage and Fiber Crops in America—Orange Judd Co.
Voorhees — Forage Crops for Soiling, Silage, Hay, and Pasture — Macmillan.

Dairying

Conn — Practical Dairy Bacteriology — Orange Judd Co.
Eckles — Dairy Cattle and Milk Production — Macmillan.
Van Slyke — Modern Methods of Testing Milk — Orange Judd Company.

Farm Animals

Clark — Modern Sheep — American Sheep Bureau Co.
Coburn — Swine in America — Orange Judd Co.
Craig — Judging Live Stock — Kenyon Printing Co.
Harper — Manual of Farm Animals — Macmillan.
Mayo — Diseases of Animals — Macmillan.
Plumb — Types and Breeds of Farm Animals — Ginn.
Shaw — Study of Breeds — Orange Judd Co.

Feeds and Feeding

Bull — Principles of Feeding Farm Animals — Macmillan.

Farm Building and Machinery

Davidson and Chase — Farm Machinery and Farm Motors — Orange Judd Co.
Dodd — Healthful Farm House — Whitcomb and Barrows.
Radford — House and Barn Plans — Radford Architectural Co.
Sanders — Farm Buildings — Sanders Publishing Co.

Farm Management

Card — Farm Management — Doubleday, Page and Co.
Roberts — Farmers' Business Handbook — Macmillan.
Hunt — How to Choose a Farm — Macmillan.
Vye — Farm Accounts — J. S. Vye.

Orchards

Green — Popular Fruit Growing — Webb Publishing Co.
Waugh — American Apple Orchard — Orange Judd Co.

Pests

Chittendin — Insects Injurious to Vegetables — Orange Judd Company.
Stevens and Hall — Diseases of Economic Plants — Macmillan.
Weed — Farm Friends and Farm Foes — D. C. Heath.

Poultry

Brigham — Progressive Poultry Culture — Torch Press.
Robinson — Principles and Practices of Poultry Culture—Ginn.

Rural Hygiene

Gerhard — Sanitation, Water Supply and Sewage Disposal of Country Houses — D. Van Nostrand Co.
Lynde — Home Water Works — Sturgis and Walton.
Price — Handbook on Sanitation — John Wiley and Sons.

Soils, Fertilizers, Irrigation and Drainage

Burkett — Soils — Orange Judd Co.
Eliott — Practical Farm Drainage — John Wiley and Sons.
Hilgard — Soils — Macmillan.
Hopkins — Soil Fertilizers and Permanent Agriculture — Ginn.
King — Irrigation and Drainage — Macmillan.
McCall — Physical Properties of Soils — Orange Judd Co.
Vivian — First Principles of Soil Fertility — Orange Judd Co.

4. The farms of the community furnish the most valuable laboratory opportunities which can be obtained. All the best things in the neighborhood should be utilized for study. Most farmers will gladly give permission for the agriculture class to

visit their farms and study the crops, animals, equipment, and operations. A teacher who does not utilize this source of material is surely losing one of the best opportunities to do efficient work.

5. The school farm is another possibility. Several of our high schools have land in addition to the playgrond. Other schools can easily rent small tracts of land near the building. This can be used for demonstration purposes. The greatest difficulty in the operation of these plots is to give them the proper care during the summer. For a solution of this difficulty see method.

6. Home projects and club work. By a home project is meant a thing to be done on the home farm, under conditions which it presents, involving an application of the pupils' school training. It should be adapted to the pupils' home conditions and to their capabilities.

There are great educational possibilities in club work and teachers should encourage students to enter this work. A strong motive on the part of the pupils is lacking when this is not done.

7. Farm papers. Almost every farm home has its farm papers. Pupils should be encouraged to read these papers and bring to the attention of the class any articles that bear upon the subject they are studying, or on any related subject that is of especial interest. It is a good plan to have a bulletin board where such material can be posted.

8. Pictures, lantern slides, charts, and demonstrations can be made a source of much useful information.

The State University will send men to demonstrate spraying, pruning, and other phases of farm work, if arrangements are made early in the school year.

The Agricultural Extension Department of the International Harvester Company, Harvester Building, Chicago, will loan lantern slides and charts on the following subjects:

1. Corn Is King. 2. Alfalfa on Every Farm. 3. A Fertile Soil Means a Prosperous People. 4. Live Stock on Every Farm. 5. Dairying. 6. Greater Profit from the Oat Crop. 7. Making More from Your Farm Poultry. 8. Weeds Mean Waste. 9. Home

Economics and Sanitation. 10. Fight the Fly. 11. Development of Agriculture.

The Portland Cement Association, 111 West Washington Street, Chicago, Ill., will loan lantern slides on the various uses of cement on the farm.

Since but one year can be given to agriculture it will be more profitable to study only those subjects that are of most interest to the farmers of Butler County. The following brief outline shows the subjects to be taught:

I. Farm Crops: Wheat, corn, oats, potatoes, grasses, legumes.

II. Soils and Soil Fertility.

III. Farm Animals: Horses, mules, cattle, hogs, sheep, poultry.

IV. Dairying.

V. Gardens and Orchards.

VI. Farm Management.

Under no circumstances must the work in high school be a mere review of the work done in the grades. Teachers will be held strictly accountable for a **differentiation** and **advance** of the work. In the high school this subject must be made a **real science** with the same type of treatment and intensity as in chemistry or physics.

In order that the best might therefore result, the class in consultation with the teacher should decide at the beginning of the year just which of the above topics should be studied in the manner indicated. It might be thought advisable to devote most of the year to the study of dairying because of the interest of the class and the nature of the particular community. The class for the following year might have altogether different interests and might desire to study different topics. If so this should be done. Intensive treatment should be given in all cases. If the schedule will permit, pupils who do not desire the particular type of work studied one year, may omit it and enter the class the following year, if there is a probability of the more attractive work being given.

To follow such a procedure, the library should be equipped with the books indicated above on the topics studied. To attempt

to teach as suggested, with the text only, is sure to result in superficial work, and disgust to all concerned. School people ought to learn to attempt only those things which they are **prepared** to do. But that does not excuse any one from **preparing** to do what ought to be done.

Method — As our schools are at present organized most of the work in agriculture will consist in getting the facts and principles of the science that have been worked out, through text books, bulletins, laboratory exercises, and such contributions as the teacher can give.

The opportunity for farm practice work must be found in co-operation with the home farm, in home project work, and in a limited use of the school farm.

The certainty of difficulties confronting men and women in the form of real problems of life, not figuratively but literally, demands that training be given the boys and girls in school.

By this method we get information and in addition a training in organization, evaluation and judgment. To illustrate: Suppose the subject of study is the feeding of dairy cattle. The problem might be: "Will it pay a farmer with a herd of ten cows to build a silo?" In making this assignment the teacher should **draw from the class** the organization. The teacher should write the organization on the blackboard so all may see it. A good question with which to start is: What are some of the things we need to know before we can answer this question? Now determine what are the things that will affect the cost. The next step would probably be the cost of filling the silo, and then the conditions that determine it. The third step would be the cost of other feeds for which silage is a substitute. Then the advantages and disadvantages in using silage. Fifth would come the conclusion. The organization might be as follows:

Problem: Will it pay a farmer with a herd of ten cows to build a silo?

I. Cost of silo.
   a. Size.
   b. Material.
   c. Style.
   d. Probable time it will last.

II. Cost of filling silo.
   a. Value of corn or other crop.
   b. Cost of labor.
   c. Cost of machinery.

III. Cost of feeds for which silage is substituted.
   a. Roughage.
   b. Corn.
   c. Other concentrates.

IV. Advantages and disadvantages.
   a. In supply of milk.
   b. In harvesting crop.
   c. In feeding crop.
   d. In any other things.

V. Conclusion.

Some of the information that will be used in the solution of this problem may be obtained from books, bulletins, and periodicals; some from neighboring farmers, or it may be from the father of some member of the class. Wherever it can be obtained, the pupils should be encouraged to seek it. They should know how to attack the solution.

There should be no difficulty of finding good problems. They are constantly confronting the parents of the pupils and they are familiar with them. A few may be suggested:

1. At the present market prices does it pay best to sell whole milk, cream, or butter?
2. Will it pay to tile drain a certain field, and how extensive should it be?
3. What crop shall be planted in a certain field to bring the best returns, everything considered?
4. Will it pay my father to purchase a tractor? (To be worked out by each student.)

It is an important thing in teaching facts and principles in agriculture that pupils shall understand their application to farm practice. There is little excuse for teaching anything in agriculture to pupils without also teaching its application to the life and work of the farm. The teacher of agriculture must ever be

mindful that the subject which he teaches is based primarily upon the commonest things of the farm and garden; that the book is only a record; that facts are gained, verified, and classified by constant reference to the animal, the plant, the soil, or successful practice; that inspiration that comes from contact with the real physical object is not nearly so apt to disappear when brought into contact with real life on the farm as is that enthusiastic inspiration so often gained from mere books.

Laboratory Work

It should be understood that agriculture is to be taught as a real science, with its corresponding amount of time given to laboratory work. It must rank with chemistry and physics, and if there be any difference, it might demand more laboratory time.

There are plenty of experiments that deal with agriculture alone and there is no need to borrow those of some other science. Where possible the laboratory work should help in the solution of some problem. Laboratory work just for its own sake is of little value.

The first thing in every experiment is for the student to know, and keep constantly in mind what he is seeking. The methods, results, and conclusions should be written up in good form in the notebook just the same as in any other science.

The students should be taught and encouraged to investigate by experimentation facts and principles that he does not understand. When possible the results of such work should not be obtainable in any other way, otherwise the student will "read" his experiment and the real experiment becomes only a verification of what he already knows. He should by experimenting also get some skill in scientific method which may be useful to him in his future operations of the farm.

The laboratory should be equipped with all the apparatus that is needed. Some of the same apparatus used in the other sciences may be used in agriculture. But there are certain pieces that must be purchased for agriculture alone. It is false economy to try to get along with only old bottles and tin cans.

The school farm should be used when arrangements can be made with some one to care for it during the summer. Often the janitor or some one living near will do the work for the crops that are raised. Or he may be employed at a fixed sum which

can be paid from the sale of the crops. If this is not enough the Board of Education may be asked to make up the difference.

Variety tests of wheat or corn, ear to row tests of corn, plots of potatoes for seed selection, and fertilizer tests are types of things that should be conducted on the school farm. While this work will be interesting to the class it will also increase the interest of the farmers of the community in the school.

The school program should be planned so that the class and teacher in agriculture will be free at certain times to make excursions to the farm within easy driving distance of the school. The work of that farmer of the community who excels in any line of farm work should be brought to the attention of the class. In making such excursions, the pupils should be instructed before leaving the school building concerning what they are to look for. Too often excursions fail because of lack of direction. It is well to have this work written up the same as any laboratory work.

The matter of home projects deserves far more attention than has yet been given. Teachers should do more to have the instruction function in the home. The following partial list of projects will give some suggestion as to the possibilities:

1. Raising an acre of corn, wheat, or oats, or one-fourth of an acre of potatoes for profit.
2. Raising some farm animal as a calf, colt, two or more pigs or lambs, etc.
3. Raising some poultry. A pen of six might be raised and the cost and production records for six months might be kept.
4. An expense record of the farm for one year might be kept.
5. There might be kept an itemized account of producing and marketing a field crop.
6. The pupils might test one or more milch cows for one year, calculating the cost of production.
7. Making an ear to row test of corn will prove profitable. A similar test might be made with potatoes.

Any or all of these will demand the **application** of the knowledge gained in school. Thus will such knowledge be tested.

It will be seen also that teachers should encourage the boys and girls to engage in the club work of the county. This is the most immediate possibility. Much will be lost if this opportunity is neglected.

As an extra encouragement in the project work, the school can offer credit for work done at home, provided it is done under the supervision of the teacher and the district superintendent of schools, and in accordance with certain rules and conditions. The credit might well be one-half unit each year, thus increasing the number of units with which such pupils graduate. If those graduating with sixteen and one-half units or even seventeen were given honorable mention at the time of graduation, it would assist in establishing this home project idea. Some plan might be conceived for allowing the substitution of one-half unit thus gained for some other half-unit in the course, under certain restrictions. The ambitious teacher might well use some of his vigor in solving this home project problem. It is a worthy one. Consult the district superintendent for details and possibilities. Of course it is understood that only such home projects will be undertaken as are feasible and within the ability of the pupils who undertake them.

There are rich possibilities for the work of agriculture in the school. Gradually the choice of subject matter will improve and with it must come an increased efficiency in method of presentation. It is very much worth while to lead the procession in this matter of improvement.

References

Nolan — The Teaching of Agriculture — Houghton.

Secondary Courses in Agriculture, Bulletin No. 38 — Department of Public Instruction, St. Paul, Minn.

CHEMISTRY

Aim — The best efforts of the teacher will be challenged in teaching chemistry. Out of a large unorganized mass of material must be selected those facts that have some bearing on the life of the high school pupil. This alone is no small task. Following this, the teacher meets the problem how to present these facts in order that they may have their most educative value.

It must be thoroughly understood from the beginning that the course in chemistry is not merely to follow the text book. If the teacher cannot see the vital relation of the subject to the immediate world about him and believe in this viewpoint, then chemistry will not function educationally as it should. It would seem, in other words, that there is another good opportunity for the teacher to set forth in the front some sound educational principles and to demonstrate his teaching ability in their execution.

It is highly possible for a pupil of chemistry to try forty experiments and write them up in his manual and yet have no notion of what science means as a factor in the industrial and economic world. And on the other hand, it is equally possible to have a general idea that chemistry has a part in industry but not to have enough of the facts of the science and their relation to industry to be able to appreciate this relation to any valuable extent. These must be harmonized.

In order that the above statements may reach their fullest realization, it is best to keep in mind the following things definitely to be accomplished in the study of chemistry:

1. It must have a practical application in daily life.
2. Through chemistry we should get an understanding and an appreciation of the great industries and the part which chemistry has played in the world civilization.
3. Since chemistry above all other sciences is an experimental subject, it follows that all the educative values which are attributed to experimentation must reach their realization in this subject. These have been set forth under the general aims of science.

4. Since chemistry is generally taught toward the end of the high school course, it must utilize the previous knowledge of the pupil. It must strongly develop **scientific procedure.**

Material — The course in chemistry should be arranged so that the laboratory is the basis of all work. All else should be subsidiary to it. If this be true it is obvious that a well equipped laboratory is essential. It is not possible to go into a detailed discussion of laboratory equipment, but it must be remembered that **running water** and **gas** or **some other sources of heat** are two necessities in any chemical laboratory.

In accordance with our first statement under material, the text book in chemistry will be of secondary importance. It should be considered as a record of results of experiments. Whatever discussion is carried on in a text has been made possible because some one in the past has worked out experiments in the laboratory.

The very nature of chemistry is such that the material is very abundant about us. The mere citation of the following words points plainly to a world of material: Fire, rust, lamp, respiration, soda water, dyes, yeast, soap, vinegar, insecticides, soil, ink, gunpowder, acetylene, poisons, baking powder, bleaching, spraying, cement, coal, digestion, disinfectant, dynamite, hard water, matches, gas, flash light, etc., etc. Most of this material exists in the home of every pupil and makes excellent material for the chemistry class.

Reading matter in books outside of the adopted text is worth while. Some books may be found which deal entirely with the chemistry of common things about us. Small pamphlets often treat of some particular phase of chemistry, as for example photography.

Magazines and newspapers are often valuable. Even the daily newspaper will often discuss some industrial phase of chemistry. Clippings from these papers can be brought to the class and will not only be valuable in themselves, but will show the class that the subject itself is a common every-day one. If a more technical discussion is desired, many magazines can be found which use more technical terms in their discussion of topics.

The work in domestic science may be cited as a source of valuable material. It would be hard to understand why girls

should not be led to see that chemistry and cooking have a common field and if the girls of the class are interested in cooking the chemistry is a very valuable related subject.

Class excursions or individual reports of visits to industrial plants which reflect chemical data can be used. For example, a paper mill, a soap factory, a dry cleaning establishment, a drug store, or a doctor's office will furnish data worth consideration.

In the search for material the teacher must remember that such material as is of a curious and passing interest only is not the type which should be selected. All material must be capable of a scientific interest and specifically suited to accomplish the aims indicated above. It should be material capable of illustrating scientific principles which in this case must be chemical principles. It is not sufficient, for example, to know some few general facts about ammonia, and that it is of great commercial importance. The **chemistry** of ammonia should be known and understood, what can be done with it **because** of its chemical nature and how and why. It is not sufficient to perform some curiously interesting experiments with dyes; the **chemistry** of dyes must be studied and understood. Only thus will it be **scientifically** clear that America can make dyes **just as good** as Germany has ever done. Until it is clearly understood there can be no **scientific** explanation that Germany through persistent propaganda has exploited her own manufacture of dyes.

Such selection of material by the teacher quite obviously is based on the presumption that (1) he has sound scholarship and knowledge of chemistry, and (2) that it will enable him to seek such material as is of interest and importance to the pupils and involves the chemistry which ought to be known. If the teacher keeps such things in mind there will be found ample material for class work. Without such care his chemistry class may be only a plaything.

Method — Since the laboratory has been given such an important place in the teaching of chemistry, it follows that the teacher should see to it that the pupils have this notion from the start. Many text books start out by discussing the subject in general or by giving some definitions. This can be illustrated by the following quotation from the first chapter of a popular text:

"1. **Chemistry** deals chiefly with substances, their properties, and the changes they undergo. Since it is a branch of natural science, chemistry also treats of certain laws and theories which help us understand the relations of different substances. * * *

"2. **Substances** — The world about us is made up of substances. Wood, glass, paper, food * * * are familiar substances; air, water, and all other gases and liquids are also substances. We might define substances as the material of which bodies are made.

"3. **Properties of Substances** — Substances are recognized and distinguished by certain characteristics known as properties. * * *"

Even by the greatest stretch of the imagination it is hardly conceivable that pupils would become enthusiastic in a subject because of its having such a beginning. These statements are generalizations, perfectly intelligible to one who has **completed** the study of chemistry but of very little significance to one who is just **beginning** such a study. So far as the psychology of such a procedure is concerned, no appeal is made either to interests or to any previous knowledge of the pupils.

Then, too, such a beginning teaches pupils to rely primarily upon their books. This is hardly in keeping with scientific method. Compare the above method of beginning with the following:

"Introduction. Very few of us can watch a fire raging without mingled feelings of wonder and awe. We are impressed by the evidence it presents of uncontrolled forces at work; we are conscious of a sense of mystery as to what becomes of the things that have been consumed; we wonder about the cause of the spectacle. * * *

"That the explanation of burning is by no means a simple matter is shown by the fact that, notwithstanding all the study which had been devoted to it, it was not until * * * less than a century and a half ago, that the fundamental facts of combustion were recognized. It will be instructive to follow a few experiments attentively and see what these facts are."

Then follow simple experiments with a burning candle, of iron, of phosphorous, etc. This opening attracts the pupils' attention at once because of the nearness of the things mentioned and because of the fact that here is made a definite attempt to

connect with the previous knowledge which the pupils have. In short the one recognizes the value of an apperceptive basis and the other completely ignores it.

Even with the best of text books in hand it is far better that the first lesson be not one out of the text at all. Rather let the teacher present some problems, possible answers to which can be found from the text and experiment. An example of this might be as follows: What makes iron rust? If the pupils examine their experiences, the answer will be probably that they do not exactly know, but that water and air have something to do with it. Remembering that they have had the technique of experimentation in the early part of their high school course, and that they have had some training in the scientific procedure, we can rest reasonably sure that they will cast about to gather data and to set up hypotheses. They perhaps will suggest an experiment. If this is not quite what it should be the teacher can help, by suggestion, to get a workable experiment. This question would be in order from the teacher — Do you think something is added to the iron or is something taken from it in the rusting process? Pupils will readily see that weighing will give this answer. A piece of iron can then be weighed and allowed to rust and then weighed again. The second weight will be more than the first. Therefore something from the air has been added to the iron. This something is called oxygen.

The subject of oxidation could be taken up now, of course from the experimental side. The pupil now wishes to know more about this gas, oxygen. This will eventually mean that the gas must be prepared in the laboratory. Now just a word about the laboratory manual in chemistry. It is thought best to use the loose leaf notebook, but where the teacher feels that he must have a guide in this work the prepared form of manual can be used. The important point here is that the manual must not get in the way of the proper method of procedure. For illustration: Suppose the time is at hand when oxygen is to be made in the laboratory. Now to make oxygen just because the manual says so or because it is a standard experiment in chemistry, is certainly a poor excuse for its being made and perhaps will not have much educative value attached to it. But on the other hand if oxygen is made in order that it may be used to **help answer** another question which is vital to the pupil, then the process takes on a different value.

The pupils have learned from the above described experiment that something comes out of the air and unites with the iron to make it rust. The teacher or the text has said that this is oxygen. Now it no doubt would be interesting on the part of the pupils to learn first hand in their own experiments that oxygen will unite with iron. The teacher will of course understand that the pupils at this time know something about oxidation, oxides, combustion, etc., and that heating iron in the presence of oxygen only brings about the rusting process in a quicker manner. It can be shown that oxygen not only readily unites with iron but with other metals as well, as copper, zinc, etc. The point here is that the making of oxygen is not the **sole purpose** of the experiment but at the same time carries with it all the technique of the experiment just the same as if the formal preparation of oxygen had been carried out.

The teacher will soon see that if chemistry is taught from the above viewpoint it is essential that the laboratory work be well planned. The work must be adequate in scope. To a large extent discussions in the class room are to interpret personal observations. All real knowledge in chemistry is either obtained by experimentation or by the application of experimental knowledge through the use of imagination. Work in the laboratory is an intellectual occupation. Good teaching must be done in the laboratory as well as in the class room. Teachers can no longer busy themselves by handing apparatus and chemicals in the laboratory period. This work must be done, of course, but the **teaching** is the vital thing. If this material cannot be distributed without a loss of valuable time then it should be distributed before the class appears in the laboratory.

It is important that the experiments in the laboratory do not take on a formal aspect. It is equally important that they do not become so commonplace and simple that standard work is not done. The two extremes must be avoided. It is pretty well understood that certain things are fundamental in chemistry and that experiments bearing on them be given in the laboratory.

It is impossible to select as a problem in chemistry that which is interesting and vital to the pupil but the solution of which calls for more chemistry than the class have had up to this time. This is particularly true of problems selected from the industrial field or even with commonplace material. It is discouraging to

pupils to attack a problem and then find that the solution is too deep for them.

The content of chemistry is made up of facts, laws, hypotheses, theories, and their histories. In other words, generalizations are many in the text books. The teacher must see to it that these come **last** in the pupils' experience and not **first.** It will be found that many facts gather around a few important generalizations. As, for example: The Conservation of Mass and Gay-Lussac's Law of Volumes. Generalizations and laws are to be presented only after the pupil has experimentally learned the facts. Facts must warrant theories. If it is found that a law is not understood more concrete cases should be given. The generalization of laws is to be constantly guarded against. Pupils might well state their own laws at first.

Much can be said about the correct viewpoint in a school subject, but unless the teacher acts accordingly the effect on the class is little. A viewpoint is a thing not to be explained to pupils but to be used by the teacher. It is an easy matter to allow pupils to get the notion that the atomic theory, for example, explains most things in chemistry. As a matter of fact this is not true at all. Teachers must be rational in such matters and not dogmatic. It is an easy matter in discussing together oxygen, O_2, and ozone, O_3, to give the pupil the notion that the formula and its manipulation are the main things with which to be concerned. In place of this the fact that O_3 is more active and oxidizes Ag while O_2 does not is of vitally more importance.

From what has been said above it should be clear that mere information secured by the pupils will not of itself be a justification of the method used by the teacher. Science of any kind and particularly chemistry, lends itself to the inductive method. Indeed the great discoveries of science are the result of this instrument of reasoning. Hence the teacher must provide with opportunities for proceeding inductively, both in the text and in the laboratory. Such a method seems so obvious that calling attention to it appears superfluous. But as long as there are teachers of science who persist in such violation of the laws both of science and of psychology, it must be emphasized. How best to provide for proper training of pupils in scientific method must concern the teacher very much.

Reflection on method in general will suggest that pupils must have something about which they can think. Some real problems

must confront them. They must be interested in its solution. They must know how to attack it. They must know where the material for its study can be found. whether in books, the laboratory, or in real life. Surely chemistry naturally adapts itself to all these suggestions.

In the best class work therefore the teacher will have some real problem confronting the pupils. He will have this problem organized not merely from his own point of view but from that of the pupils as well. They will assist in discovering the necessary steps for its solution and thus will know how to explain these steps. Such a procedure is sure to result in good training as well as in the acquisition of information. Recitations conducted on the basis of the memorizing of the text must always be regarded with suspicion.

Useful information involving the understanding of chemical principles will be attractive to pupils. If, for example, a contagious disease is prevalent in a community, quite naturally many people will use some means of disinfecting. Burning sulphur has often been used for this purpose. Is this a good thing? What effect will it have on lace curtains, or carpets, or clothing? Why are lace curtains, etc., usually found to be somewhat destroyed within a short time after sulphur has been burned for disinfecting? By means of the equation the pupils will readily discover what acid results and why it is destructive to clothing, curtains, etc.

Again the question might be raised as to why silver knives and forks are tarnished when eggs are on the menu. The exact chemical action can easily be found and another bit of useful information will have been added to that already possessed by the pupils.

Such questions are available. They should be used. Why does natural gas for heating purposes usually produce vapor in the room? Why should a pipe leading to the flue always be used with a gas range or gas heater? How might "hard" water be "softened?" How can the waste pipe from the kitchen sink be kept clean? These and numerous others will furnish drill in the use of the equation and at the same time give useful chemical information.

Not only is there a practical side to this kind of chemistry but there is also a cultural one. Such a method will inevitably

lead to a further conclusion concerning the value of chemistry to industry and to society at large. The social values interpreted do much toward making better citizens. Chemistry, then, if rightly taught, can make many contributions to the education of the pupils.

Reference

Hall and Smith — The Teaching of Chemistry in Public Schools — Longmans.

PHYSICS

Aim — It is so easy to become confused in the field of any science which is so large as that of physics. In order that there may be no wandering due to a lack of definite things to accomplish, the following specific statements are made:

1. It is one of the aims of physics to train up men and women who can take their places in the ordinary vocations of life with an intelligent understanding of the physical principles which are continually met. The more complex our civilization the more need for an understanding of the physical laws and principles that underlie our modern appliances. When the boys and girls in our high schools today become men and women, they will use the modern appliances. So it is necessary for our pupils to know the big dynamic things in physics that they may be intelligent in the use of the common conveniences of the present and future.

The scarcity of labor in the country can and will be offset by the use of machinery. The gas machine, whose power is so well adapted for driving light machinery, seems soon destined to become a necessity for every country home. If the pupils now in our schools are taught in such a way that they thoroughly understand the principles upon which the gas engine depends, they will be saved an incalculable amount of time and trouble when they are called upon to use such a machine.

2. Physics is a science which deals with measurement; therefore it offers the opportunity to train pupils in quantitative thinking and in definite and exact quantitative knowledge. No other science deals with so many different classes of measurements as physics, and hence is well adapted to this aim.

3. To know and understand the nature of physical relations is even better than to be trained in quantitative measurements. Not that quantitative measurements should be superseded but that it should be supplemented. Surely it is as important to know what can be **done** with electricity as it is to know the mathematical values gained through the formulae of the mathematical laws of electricity. It is quite practical to be able to arrange cells in a series of parallel connection and know what can be done with such arrangement. It is quite true that

some one must figure all the formulae of electricity before all applications may be made, but perhaps it is some one other than the high school pupil. Intricacies of mathematical calculations are for the specialist; even the layman may understand the nature of physical relations.

4. Another aim of the teaching of physics is to give pupils a broad and genuine appreciation of what the development of physics means in modern life.

Pupils will appreciate the importance of this subject more when they come to realize what is being done in the line of invention for doing the world's work. Most machinery is constructed upon some physical law or principle. Our modern high buildings, much of our present means of communications and transportation, our systems of lighting and heating; in fact the modern conveniences of our life depend upon principles of physics.

Material — The following are suggested as some sources of material:

1. The adopted text. A word of caution seems necessary here. The teacher must remember that he is teaching boys and girls, and that his problem is how to develop his pupils by the use of this subject and not how many pages of the text or how many experiments can be covered. Use the text as a hand book.

2. Collateral reading in other texts. Often students can obtain a better understanding of a subject by consulting other texts than their own. Different authors treat a subject from different points of view. Then the language of one author may be more suited to the students' understanding than that of another.

By consulting other texts the students are acquiring good habits. To wish to know what others have said is surely more commendable than to believe that any one author has spoken the final word on the subject.

3. Current magazines, farm journals, newspapers, etc. Pupils should be encouraged to bring to class articles on this subject that they have found in their reading outside of school. This is an especially good source from which to draw material to realize the fourth aim as stated above.

Below is a list of articles taken from current magazines:

(1) What Causes the Base Ball to Curve? — Popular Science Monthly, June, 1918, page 900.
(2) How the Lever Principle Was Applied in Righting a Sunken Steamer.— Scientific American, March 30, 1918.
(3) West Coast Shipbuilding.— American Review of Reviews, June, 1918, page 619.
(4) The New Erie Canal.— Review of Reviews, June, 1918, page 590.
(5) Tractors in California's Bean Fields.— Country Gentleman, June 8, 1918, page 1.
(6) An Automatic Clothesline.— Country Gentleman, June 8, 1918, page 20.
(7) How the Tractor Really Works.— Country Gentleman, June 8, 1918, page 5.
(8) Handy Reel for Barbed Wire.— The Ohio Farmer, May 25, 1918, page 2.

4. There are a number of monographs put out by manufacturers which offer good material for physics. These can be had for the asking and should be in the library of every high school; for example, The Joint Committee Monograph Series, which include such numbers as Elementary Electrical Testing, Edison Storage Batteries, and Mechanics of the Sewing Machine. These may be secured by addressing J. A. Randall, Pratt Institute, Brooklyn, N. Y.

5. The machinery and appliances of the farm and home should be used in the course in physics. The cream separator, sewing machine, heating system, pump, fireless cooker, vacuum cleaner, and the three-horse evener are but a few of the many things that can be found to show the application of physical principles. The study of such appliances will surely be of more use to the pupils than a great amount of time on such things as the statical electric machine, of which they may never hear outside of school.

6. The natural phenomena of heat, light, etc., offer another source of material. Such things as dew, frost, evaporation, rain, and the rainbow should be understood by every one who wishes to be considered intelligent.

Method — There is no doubt that the material of physics can be made interesting if properly presented. Most of the prominent educators of today are agreed that "The problematic situation should be the unit of instruction, and that the aim of the student should be to arrive, by correct scientific thinking and experimenting, at a solution of a **significant problem.**" Nor is it sufficient that the student be able to **solve** problems only. He who cannot see the problems confronting him in his everyday life is not much better because he can solve them. So it is just as essential to train to **see** problems as it is to train to **solve** them.

Too much of the teacher's time and effort has been consumed in giving the student the results. It is well to remember that "Science in its completed form is the statement of the solutions of problems. Science in its personal form in which the student needs to acquire it consists in the stating of the problem in such a way as to give the student an appreciation why anybody should try to work at the subject."

Let us keep away from the problems that are, to the student, wholly artificial, because the solution of such tend to dwarf interest.

While the ultimate end is to be able to discover problems in the ordinary familiar facts, it is more difficult for those untrained to see problems in such facts than it is to see the problems in the unusual. The newness and strangeness of wireless telegraphy interests boys more than the telephone. To arouse interest the starting point should be some problem that offers this element. Yet to continue to study only the strange and unusual would be to distort the pupils' attitude toward this subject.

If the class is studying center of gravity, the following problem might be used, not because of its strangeness, but because of the fact that it would probably be of interest to most of the class: Why is a wagon loaded with a ton and a half of hay more likely to upset than one loaded with forty-four bushels of corn?

Having stated the problem, now the pupils must be led to see what are the necessary factors involved in its solution. This requires **teaching** on the part of the instructor. Unless the pupils clearly see these factors the solution will not be

found. All the time necessary therefore for a comprehension of the factors is time well spent and will reduce the time for solving the problem itself. The teacher having in mind what must be known will draw from his pupils the following organization:

I. Factors involved:
   a. Force.
   b. Height.
   c. Width.
   d. Base.
   e. Material of which the loads are composed.

II. Experiments to discover how the following factors affect the problem:
   a. What force causes load to overturn?
   b. The direction in which this force acts.
   c. When a force acts downward in a perpendicular line on a body, where must the support be placed to prevent the object from falling?
   d. How the size of the support-base affects the ease with which an object is overturned.
   e. Can an object be supported by a point? If so, at what point of an object must the point be placed?
   f. When an object overturns does this point become higher or lower?

III. Conclusion.

In making this assignment, probably the first question will be, What are the things we will have to consider? The class may not see at first that there must be a force to cause any motion. However, the order in which these factors are obtained is immaterial. Probably all the factors except force will be given without any difficulty.

Place a book on a desk and ask how long it will remain there. They will soon see that the book will not move unless acted upon by some force outside itself. If an automobile, with the engine not running, is standing on a hillside what will happen when the brakes are released? They will see that it is some force outside the machine that causes the motion. Devise some simple experiment to show that it is the force of the earth's attraction that causes all objects not supported to fall to the earth. When

the class have this fact, give them the name of this force — gravity.

They will probably be able to tell the direction in which this force acts without any further experiment, but if not, ask how objects behave in other parts of the earth; toward what point of the earth an object always falls.

Simple experiments will suggest themselves to discover c and d. In attempting to discover e, have each take a ruler and hold in a vertical position, lightly between the thumb and finger, and gradually slide the finger along the ruler until a place is found where the ruler will remain at any angle at which it is placed. Then have each one to turn it on its side, supporting it with the thumb or finger at this place and trying the blunt end of a lead pencil. Can it be supported on the point of the pencil? Have a ruler with a hole bored half way through at its center, and let the class try to support this ruler on the point of a pencil. Have the students see that the ruler will remain at rest at any angle. Also have them determine where this point is located, after which the name of this point should be given. Furthermore have them determine the direction this point takes when an object falls.

Again the subject of machines and work might be motivated by proposing some problem as the following:

Plan a simple and inexpensive device, that can be operated by one person, for lifting a wagon bed from a wagon.

The first question to be asked would be, What must we know before we can begin to plan? The pupils themselves should answer this question. After this has been discussed by the pupils under the guidance of the teacher, the following data will be seen to be required:

I. Approximate weight of wagon bed.

II. Approximate force that can be extended by one person. (By a comparison of I and II, the pupils will readily see the mechanical advantage needed.)

III. How the apparatus may be attached to the bed.

IV. Different machines that may be used for lifting:
   a. Pulleys.
   b. Windlass.

c. Differential pulley.
d. Wheel and axle.
e. Other machines.

V. Combinations of these machines that may be made to suit the case.
a. Pulleys and windlass.
b. Wheel and axle, and windlass.

VI. Convenience of each device.

After an assignment in this way, pupils will approach the study of these machines with much more interest. They will go to the laboratory to study the pulley and the lever for a definite purpose. A laboratory experiment of this kind is really worth while, for the pupils will see the reason for it. When this problem has been solved, the class will not only have acquired the knowledge they would have gotten by some other method, but they will have applied that knowledge. In other words, they will have done some reflective thinking.

Pupils must be led gradually to the point where they will see that many of the ordinary things about them are worthy of scientific study. They must also see the two distinct phases of this subject, namely, its laws and principles, and their application.

The whole subject of light may be motivated by the solution of the problem, What causes the rainbow? Some discussion of the rainbow ought to precede any attempt at the organization. This does not mean that the discussions will be scientific. It is merely to be such as will bring before the entire class a great deal of information and common knowledge which might be the means of starting some inquiry or raising some questions. In other words the class is simply taking an inventory of the stock of knowledge available. Later it becomes organized and therefore scientific.

Before the discussion will have proceeded far it will have become evident that there are two things which seem necessary to discover: (1) The cause of the color arrangement; and (2) the cause of the curved shape. By skillful questions and guidance the teacher will be able to draw the following or a similar organization **from the class:**

I. Cause of the color arrangement.
   a. Experiment separating light into its colors by means of a prism.
   b. Discussion of the reason involving the explanation and understanding of such terms as:
      1. Refraction.
      2. Reflection.
      3. Angles of reflection and incidence, critical angle, etc.
      4. Spectra.

      Etc., etc.
   c. Final statement of cause of color arrangement.

II. Cause of curved shape.
   a. Experiment separating light by using a round glass flask filled with water, followed by discussion and explanation.
   b. Comparison of raindrop with glass flask.
      1. Behavior of light in attempting to pass through the raindrop.
      2. Position of raindrops in order to reflect the light to the observer's eye.
      3. Angle made by each color with the horizontal from observer's eye.
      4. Position of raindrops and of sun to give these angles.

III. Conclusion.

In this solution it is quite likely that only I and II and a under I are all that can be put down on the blackboard before the problem is solved. All the succeeding steps will be indicated in the organization **as they develop.** Thus will the solution of this particular problem differ somewhat from solutions of other problems. The class are **discovering** the necessary steps as they proceed. Hence it may be several days indeed before the organization and solution will be completed. There will be laboratory experiments and much discussion before the problem is completely solved. After the solution has been given and after the arrangement of the organization has been made, an excellent review may be had by asking for III, Conclusion. Nothing but clearness and accuracy in giving III must be accepted by the teacher.

In such a procedure as indicated practically all the principles of light will have been discussed which are necessary for high school pupils to know. However the teacher can now proceed to apply these principles in a variety of ways. There are the camera, lens of spectacles, curved and plane mirrors, etc., etc., which can be utilized for the purpose of clarifying, applying, and adding information. These can be motivated by using smaller problems if desired. However, the skillful teacher, and only the skillful one, has motivated the whole subject of light by solving a simple and common problem. The entire hundred or more pages of subject matter in the text have taken on meaning and interest in the attempt to use it in explaining simple and natural phenomena.

Well selected problems accompanied with good organization that involves large and important principles will accomplish more than could be accomplished by a study of the text alone. Instead of the study of the various machines as if they were independent of each other, it is far better to show how all machines depend upon the two principles of moments of force and of work. In fact all the principles of the mechanics of solids necessary to teach high school students, in addition to the two mentioned above, consists of parallelogram of motions, Newton's third law of motion, gravity, inertia, mass, and uniform speed.

Whenever possible, study at first hand the methods that have been used in applying physical principles. Suppose the subject under discussion is heat. A good problem would be, What are the advantages of the different methods of heating a dwelling? Examine the heating apparatus in the school building. Make visits to neighboring dwellings, to see the different systems in operation. Be sure the pupils know exactly what to observe before going. There must be no vagueness or indifference.

Inability on the part of the teacher to see how to organize **all** the work in physics around some problem should not prevent the use of problems to **as great extent as the teacher can possibly do so.** Continual efforts in this line will make it easier to see how all work may gradually be so conducted. The pupils will be far more developed by the use of this method even to some extent than if the mere text book recitation and cramming process were followed alone.

To give the class an appreciation of what physics has done and is doing for the world, they, as well as the teacher, should

be on the lookout for articles in newspapers, magazines, etc., that illustrate this. There should **not** be any **stated time** for lessons of this kind, but they should be given every day in connection with the work in hand. It should become an integral part of all the work in physics.

The language of physics is highly symbolic, condensed, and technical. Words, definitions, and algebraic formulae are mere symbols. While they are a great advantage to the trained scientist, they are of but little use to the high school student. Unless the pupils understand clearly the things and relations for which these symbols stand, it were better not to use them. Most pupils who have reached the third year of high school have no difficulty in substituting in an algebraic formulae. But such work does **not** give **increased power.** It is better not to use the formulae before the pupils have become thoroughly acquainted with the laws or principles for which they stand. The application of the laws and principles are surely of as much value as the mathematical solutions involving formulae and other symbols.

Drill has its place in physics as well as in other subjects. Those things that we need to remember should be drilled upon until they are fixed in memory. But such drill should not occur until the principle is thoroughly clear to the class.

Of course reviews will be conducted, but the best teachers will seek to involve them in the solution of larger problems, rather than to have them consist of drill only.

The laboratory exercise should be a step in the solution of a real problem which is of interest to the student. In the problem above concerning the lifting of the wagon bed, the laboratory should be used to discover the efficiency of movable pulleys, and the principle of moments as applied to the windlass and the wheel and axle.

Laboratory exercises in physics are intended to secure results in two different lines. The first, and probably the most important, is to gather data for the solution of some principle. The second is to acquire skill in manipulation of apparatus. Since the latter can be secured in any exercise that has for its purpose the accomplishing of the former, it is useless to give any exercises exclusively for the purpose of acquiring motor skill. But teachers should see that pupils exercise care and thought in the arrangement and manipulation of apparatus. By a series of skillful

questions the students can be led to see the proper method and material to be used in accomplishing the results which he is seeking. There is just as much need for teaching in the laboratory as there is in any recitation.

If the laboratory experiment is intended to aid in the solution of a problem it is evident that no laboratory manual can be used in its entirety. The teacher should select the exercise from the manual that suits the question under discussion. When there is no suitable exercise in the manual, the teacher should unhesitatingly devise one that does suit his purpose.

The equipment of the laboratory should be such that each pupil, or each group of pupils, may have a set. Where this cannot be done there should be two or more problems under consideration at the same time. There is no valid reason why a laboratory should not have a goodly supply of the less expensive apparatus, as meter sticks, rulers, thermometers, glass tubing, etc. One good balance is probably sufficient if supplemented by a number of less expensive ones.

There should be proper cases provided for all apparatus, and students should be required to take the proper care of it, and to return it to its place after using it.

Let it be understood that there is need of more efficient laboratory instruction. There are fine opportunities for teachers to do work which will attract notice and stamp them as being superior.

Reference

Twiss — Science Teaching — Macmillan.

ALGEBRA

Aim — As is true of all other subjects, it is necessary to justify the existence of algebra in the high school curriculum. In order to do this, it is important that both the teacher and pupil get certain fundamental notions of the subject.

Algebra is not the last chapter of arithmetic. Algebra is a general science, while arithmetic is a particular science. Although reference to the child's work in arithmetic is advantageous in the study of algebra, yet the pupil should clearly understand that the function of algebra is an entirely different thing. Algebra is an abstract science. It is for this reason that the letters of the alphabet are used as symbols. They are entirely devoid of any concrete meaning in themselves. If numbers, words, or triangles were used as symbols, then the abstraction of the situation would be impaired, for each of these call up in our mind rich experiences.

The study of algebra is concerned, then, with the combination, recombination, and manipulation of these abstract symbols. The pupil soon discovers that algebra is different from arithmetic in that it has no tables of weights and measures. Algebra does not attempt to measure, but deals with the manipulation of symbols and the laws which govern them.

It is worth while for the teacher and pupil to see that this matter of abstraction has some bearing on the activities of life. Psychology tells us that "we are able to react at any given moment only to one aspect of a whole situation." It is for this reason that we abstract certain parts of a situation and dwell upon it to the exclusion of other parts. For example, when a customer is buying an article of certain kind from a counter upon which there are displayed various kinds of articles, his attention is held to the particular kind of article which he wishes to buy and does not wander to include articles of many kinds. In other words, he abstracts one kind and holds it aside for consideration. Many illustrations could be given which show that we are wont to make abstractions and neglect certain parts of our experiences. In fact, the ability to do this is a significant and desirable phase of one's training.

Still another stage of abstraction exists when one substitutes one's own thoughts of a matter for the actual facts or

conditions. Then with these self-created products we are able to make comparisons and discriminations to a considerable degree of complexity. This type of reasoning is found certainly when one sets up hypotheses or plans an undertaking of some sort.

With such introductory statements it will be well to follow with some more formal observations so that particular things may be more specifically emphasized.

1. Algebra has a practical value. Many things come to the attention of the high school boy or girl which need a knowledge of algebra to make them appreciated. Algebraic terms and expressions are found in geometry and other school subjects, as physics and chemistry. Magazines, papers, and reference works have references to algebra, one of the most common forms being the use of the graph.

2. The place of algebra in the world's work should receive attention. It is worth while for high school pupils to get the notion that modern civilization owes much to technical arts which in turn are closely connected with mathematics. Boys and girls should learn that large bridges, railroad tracks, waterways and drains, ships, large building structures, machines, and the surveying of the land about them involve mathematics. In fact their environment is mathematically alive.

3. Algebra furnishes drill in abstract reasoning. Geometry does this to some extent, but in it we can constantly refer back to the figure and then possibly visualize the material object itself. But in algebra we are forced to combine and manipulate abstract symbols.

4. Algebra may be justified in the course as a means of testing out the capacities and tendencies of pupils along certain lines.

5. To gain complete mastery of algebra as a **tool** must be kept steadily in the minds of both teacher and pupils. Unless this be accomplished during the first year much of the value of the year's work is lost.

Material and Method — The adopted text will form the basis of the work. This does not mean that the teacher is to become a slave to the text and must solve all the problems on every page. Rather, it is the teacher's business to teach algebra,

even though it takes him outside of his own text. Inasmuch as drill is one of the most important parts of the work, it would seem necessary to procure more problems of certain types than the text gives.

Perhaps the first question which presents itself to the teacher of algebra is, How shall I begin? Some teachers prefer to begin with written problems. If this is done it should be remembered that the **main** object is the understanding of the use of letters. Algebra differs from arithmetic by using letters as well as figures, and the pupils must get this notion at once. Negative numbers offer another good place to begin. They are something new and can generally be made interesting because of their newness. Many things lend themselves to this explanation, such as gain and loss, latitude and longitude, years B. C. and years A. D., temperature, etc.

The following illustrates how negative numbers could be introduced: Think of a business man who receives during the day's business cash, checks, notes, due bills, drafts, and other papers representing credit and debt. Suppose this man should pile all these papers one upon the other. The sum or the result of the day's business would be found by adding all the credits and debits separately, and the substracting the less from the greater and marking the result credit or debit according to which is the larger number. To distinguish between the credits and the debits we can use the plus and the minus signs. This will give the notion and carefully selected problems will clarify the process. Letters can then be gradually introduced, referring to figures when the pupils are confused. The pupils who cannot express in symbols "a number greater than c by d" will be helped by the analogous arithmetical expression, "a number greater than 40 by 7."

After the introduction of letters the matter of numerical substitution should be used quite often. The pupil who persists in saying that $\frac{1}{a} + \frac{1}{b} = \frac{1}{a+b}$ will correct himself when asked if $\frac{1}{3} + \frac{1}{5} = \frac{1}{8}$. They are also useful as checks on a solution.

It should be realized from the beginning that there are two general types of work in algebra: (1) Drill and (2) reasoning. Problems of the latter sort should occupy the time and attention of the class throughout the course. If this type of work is a

thing worth while, then the custom of some teachers **"getting the equation"** for pupils in written problems, merely for the asking, is stoutly to be condemned.

Drill is absolutely essential to progress and success in the study of algebra. Many processes, such as the four fundamentals, laws of signs, laws of exponents, manipulation of signs of aggregation, factoring, etc., must become automatic if the pupil is to devote his attention to the reasoning side. Speed and accuracy are terms equally important in algebra as in arithmetic. Too much emphasis cannot be laid upon the importance of this matter. Teachers, and pupils as well, must realize that a complete automatic mastery of the manipulation of algebraic symbols and signs is necessary and nothing short of this will be satisfactory. Much work can be motivated by leading the pupil to see that today's lesson is necessary in order to understand and solve tomorrow's lesson.

Tests conducted in this county show that first year algebra pupils make the greatest number of errors in problems involving symbols of aggregation. This should suggest two things for the teacher: (1) To drill more upon this particular process; (2) to reduce the complexity of problems of this sort. It is suggested that two sets of symbols of aggregation and at the most three sets within the same problem are sufficient to fix the process. Further complicated problems than these are a waste of time and effort. In connection with the above mentioned test, another common error was noted. In removing signs of aggregation where a parenthesis was preceded by a minus sign many pupils placed the quantity in the minus parenthesis beneath the first part of the problem and then subtracted. In a majority of cases mistakes were made.

The following method is much better:

$$2a - [2b - (3c + 2b)] = 2a - [2b - 3c - 2b] =$$
$$2a - 2b + 3c + 2b = 2a + 3c.$$

Perhaps the place where interest is lost and the most trouble encountered is in factoring. Since it often happens that a mode of factoring is based upon a method of multiplication, it follows that factoring might well be studied immediately after the different types of multiplication, as, for example, when $(x - 2)\ (x - 6)$ is being studied as a special type of multiplica-

tion, take up immediately the corresponding case of factoring, $a^2 - a - 6$.

It seems that authors of text books in algebra have vied with each other in seeing how many cases of factoring could be introduced. This is a waste of time and confusing to the pupil. It is believed that the following cases are sufficient for the high school pupil:

1. $ax + ay + az$.
2. $ax^2 + bx + c$ and its special cases.
3. $a^2 - b^2$.
4. $a^3 \pm b^3$.
5. Grouping terms, example: $a^2x - xy + a^2y^2 - y^3$.
6. Remainder theorem, example: $x^3 - 6x - 9 = 0$.

This does not mean, however, that the teacher should not be familiar with other methods in order to meet emergency cases.

Perhaps one of the most important parts of algebra from the practical standpoint is that of the equation. It is difficult to proceed far in the solution of any consequence before the need of an equation is felt. Pupils of the elementary school have a general notion of the equation from such formula as, Percentage = Base $\times$ Rate, $100\% = \$500$, etc. The equation is met in other high school subjects, as in geometry: $\overline{AB}^2 - \overline{CD}^2 = \overline{CB}^2$; in chemistry: $H_2SO_4 + 2NaCl = 2HCl + Na_2SO_4$; in physics: $E = \frac{mv^2}{2g}$. In algebra the pupil learns **more** about the equation and **why** certain things can be done. At first he may reason out the value of x in an equation, but later an explanation must be given. This can be done concretely by means of the so-called "equation balance," which is nothing more than a beam balance with scale pans to hold weights. By means of the device can be explained such topics as transposition, clearing of fractions, etc. For further information upon the "equation balance" see any school algebra, as Collins's Practical Elementary Algebra, page 129.

In quadratic equations the most important method is the Formula Method. The Completing the Square Method should be

given first in order to develop the formula itself and to show how much easier the Formula Method is.

From the reasoning standpoint, written problems are the most important. They involve (1) ability to think and (2) knowledge of how to put the problems into symbolic form and solve the equation. In order for a pupil to solve a written problem several things are necessary: (1) A clear reading of the problem; (2) to know what is given; (3) to know what is required; (4) a notion of how to go about the solution, and (5) ability to translate an English sentence into algebraic shorthand. Perhaps it would be advantageous to give the pupil some drill in translating English sentences into algebraic symbols before he attacks a real problem. As, for example, the sum of the squares of a and b; the difference of the cubes of x and y; x exceeds y; the product of 4 and c, etc.

The setting forth of data in the form of a graph is a very common procedure. Illustrations of this fact can be found in newspapers, magazines, weather reports, wheat markets, and all scientific reading matter. Concrete examples are: Collier's Weekly, January 26, 1918, page 36, which explains "Why You Are Not Paying Thirty Cents for Sugar;" Electrical Experiments, April, 1918, page 827, which explains "The Saving of Electrical Energy in New York City on a 'Garfield' Monday."

If, then, graphs are common in the reading of the average individual, it is important that the school offer some training along this line. Two phases present themselves: (1) The ability readily to get the idea which the graph intends to convey and (2) the ability to arrange data and construct graphs. It is the business of algebra to give training in both of these.

Great care should be exercised by the teacher, in the beginning, that the pupils get the fundamental principles underlying the construction of graphs. Perhaps more interest will attach itself to the work if data which is of vital interest to the pupils be constructed in the form of a graph. The daily scores of each of the pupils in algebra over a period of two or more weeks compared with that of the class score would furnish a good problem with which to begin the study of graphs.

This part of algebra is very practical and the teacher should avail himself of the opportunity afforded. Pupils might be asked to collect and bring to class examples of the actual use of the graph.

Most algebras of recent edition are using many informational problems. This type of problem is valuable insofar as it is either practical in itself or in that it merely adds interest to the solution of the abstract problem. A glance through any magazine along mechanical or electrical lines will show the uses of algebra in the explanation of physical and chemical phenomena. Even if the mathematics involved in a solution cannot be mastered by the high school pupil, it is worth while for him to see that mathematics is an important factor.

If a year and one-half is given to the study of algebra, the selection of important topics to be studied will not be a serious consideration. However, even here, it is highly advisable to complete well what is attempted rather than the spending of too much time on the more advanced topics.

Where only one year of work is offered the following topics should be covered:

1. The four fundamentals.
2. Written problems and drill work throughout the course.
3. Signs of aggregation.
4. Factoring.
5. Equations.
6. Graphs. These can be distributed throughout the course.
7. H. C. F. and L. C. M. Only simple cases.
8. Fractions. Only simple problems. For example, fractions to be added whose denominations are quadratic or of the third degree, might well be omitted.
9. Simultaneous equations.
10. Involution and evolution, including radicals. Enough problems to fix the more important processes. It is not thought advisable to give much time to the extraction of long and difficult roots.
11. Quadratic equations, simpler forms.
12. Some notion of the binomial theorem.

The Advanced Course in Algebra will cover one-half year and will consider the following topics:

1. Inequalities.
2. Ratio and proportion.
3. Advanced quadratic equations.
4. Theory of exponents.
5. Simultaneous equations involving quadratics.
6. Variables and limits.
7. Progressions.
8. Further work with binomial theorem.
9. Logarithms. The use of this topic will depend upon the class. If studied at all a general notion of their use can be given as well as some practice in their manipulation.

References

Schultze — The Teaching of Mathematics in Secondary Schools — Macmillan.

Young — The Teaching of Mathematics in the Elementary and Secondary Schools — Longmans.

GEOMETRY

Aim — Aside from the general aims of mathematics, geometry offers the following specific aims:

1. To train the student in the habit of logical reasoning. There is no subject in the high school that offers so good an example of applied logic as geometry. Since the material is simple and easily understood, it does not present the difficulties in establishing the premises that are found in other subjects. The student can with a good degree of certainty see what effect certain conditions in a theorem will have upon the conclusion, while, because of his lack of experience, he cannot so easily see the results in such subjects as history or economics where there are so many factors involved. In geometry all but the essentials can be eliminated; so his conclusions are reasonably accurate. Since all deductive reasoning must follow essentially the form that is set forth in geometry, it will help to establish the habit of logical reasoning.

2. To train in the art of simple and exact expression. The material of geometry, because of its long continued use as a subject of study, has reached a high stage of perfection. So the theorems, axioms, definitions, etc., are stated in such simple and exact language that the student has no difficulty in getting the meaning intended. And the student himself must be definite and exact in his statements, for it is not possible to be careless in expression and reach the definite conclusions demanded by geometric proof.

3. To train in the use of information that may be helpful to the student in his life work. Certainly the civil or mechanical engineer, the architect, the draftsman, or the landscape gardener must have a knowledge of geometry. It may not be so easy to see how the farmer or mechanic would have any occasion for its use, yet if we will consider carefully, we will discover many such occasions. If a farmer wishes to lay out his farm to the best advantage, a knowledge of geometry will help. Or he may have occasion to divide a field into two or more equal parts or to locate tile drains. The mechanic in reading drawings or making his own working drawings will have opportunity to apply his geometry if in his school work he has been taught how to do so. Demonstrative geometry

without its applications will not function in the life work of many persons. So to realize the practical side of geometry, it is necessary to teach its applications in school.

4. To develop the imagination. Because invention has played a large part in the rapid advance of civilization, and because the inventor must of necessity have an imaginative mind, it is well worth our effort to cultivate this phase of mental activity. This worthy aim must be realized by every successful teacher of geometry.

While plane geometry offers ample opportunity for training the imagination, it is in solid geometry that the student is compelled to use his imagination. He must visualize solid forms from flat drawings.

5. A recognition of the social value of geometry. As in all other mathematics so in geometry must the social value be significant. The place that geometry occupies in the world's constructive activities should be clearly seen. While there may be many intermediary steps between the simple and often abstract theorems in the book and the actual application in the work of the day, yet the relation should be clearly indicated. Motive for the work of the class room can thus be established.

Material — One year will be given to the study of plane geometry and one-half year to solid geometry. Some sources of material can be indicated, but it must be remembered that the teacher who is alert can easily find additional sources.

1. The adopted text. Whatever text is used it is well to follow the recommendations of the National Educational Association in its syllabus on the teaching of geometry, which may be found in School Science and Mathematics for April, May, and June, 1911.

2. Industrial design and architectural ornament are replete with details that may be used as a source of supply for geometric problems. There are three different kinds of problems that the teacher should recognize:

a. Problems that involve the construction of figures themselves.

b. The demonstrations that are necessary to establish the numerous relations which are visible to the mathematician and which must occasionally be assumed by the designer.

c. Problems in computation.

Industrial problems can be found in tile and mosaic floors, parquetry, linoleum, oil cloth, steel ceilings, ornamental iron work, leaded glass, cut glass, etc. Where the objects themselves are not available the figures can be found in trade catalogues.

Problems in architectural ornament may be obtained from photographs of buildings, showing the windows, ornamental iron, carved wood or stone, on the outside; and on the inside, the furniture, choir screens, rafters, etc.

The students will in this way be brought into contact with the beautiful in design which would probably not be met in any other way.

3. Problems in indirect measurement. The heights of buildings and other objects, the widths of streams, and the lengths of lines that pass through obstructions are interesting types of problems when solved by the similarity of triangles.

4. Problems from physics, mechanics, engineers' and builders' manuals, carpentry, and masonry; for example, problems concerning trusses used in bridges and self-supporting roofs, arches in culverts and concrete bridges, etc.

In selecting problems of this kind the teacher must see that there are no technical terms or mechanical principles involved that the student does not understand.

If the teacher desires a more extended list of problems, he may find them in the following:

a. An extended list of books on the range of applied problems published in School Science and Mathematics, Vol. VIII, No. 8, November, 1908, pages 641-644.

b. Real Problems in Geometry — Teachers' College Record, March, 1909.

c. Real Applied Problems in Algebra and Geometry — School Science and Mathematics. A collection begun in 1909 by a committee of the Central Association of Science and Mathematics Teachers. The problems collected up to November, 1909, have been classified and published in pamphlet form.

Method — If we are to accomplish the aims set forth for this subject it is evident that we must break away from the mere

memorizing of proofs. There may have been a time that teachers taught geometry in the high school for the purpose of training the memory, but that day is past. Of course in geometry, as in all other subjects, there is a certain amount of material that must be memorized, but surely proofs of theorems should not be memorized.

Since we give but little constructive geometry before the student has reached the second year of the high school, better results will be obtained if we begin the course by exercises in construction. Each student should be supplied with a pencil, straight edge, triangle, compass and protractor.

Teach the following by **oral direction:**

1. To bisect a given line.
2. To bisect a given arc of a circle.
3. To bisect a given angle.
4. To erect a perpendicular at a given point in a line.
5. To drop a perpendicular to a given line from a point without the line.
6. To trisect a right angle.
7. To inscribe a circle in a triangle.
8. To pass a circle through three points not in the same straight line.
9. To draw a line parallel to a given line through an external point.

There should be no attempt to prove the above, but each member of the class should tell in his notebook just what he did in each problem.

Simple problems in construction that will involve the principles learned in the recitation should be assigned for the study period. There should be no undue haste in undertaking the proofs of theorems. This work is entirely different from anything the student has had before; there is danger of going over this so rapidly that the student becomes confused. The teacher should have a list of the terms and definitions that he wishes to teach, and the proper figures to use in teaching them.

Teach the geometric definition of a line, parallel lines, arc, circle, radius, diameter, cord, etc. Bring out the obvious facts

that the student will use afterward in his proofs, such as: All straight angles are equal; all right angles are equal; a straight line is the shortest distance between two points; two points determine a straight line; the sum of the two sides of a triangle is greater than the third side. If these definitions found in the text are too difficult, then those developed should be copied in the notebook, but no attempt should be made to prove them. For such proofs would seem unnecessary to the student just beginning geometry and there would be a lack of interest.

Let the teacher be careful in teaching these definitions so as not to leave the impression that the whole thing is artificial and abstract. The pupils have a right to know why such definitions should be learned or even understood. The teacher must justify his procedure **to the pupils.** Let him ask himself why he should teach them. The teacher will soon recognize that he is teaching them because there must be a common vocabulary for pupils and teacher so that there will be no confusion over what is being discussed. But the teacher should not merely **tell** the pupils why; he should **teach** them. This may be done by drawing from the pupils the necessity for having clear definitions. If there be any necessity for having them, surely the pupils have a right to know what it is.

One of the great difficulties in starting this subject is to get the students to see the purpose of it. They do not see what we are driving at or the need for proofs. Don't attempt to prove theorems that seem **obviously true** to the class. They may be led to see the need for proofs by having them to make some statement about a figure that has been drawn upon the blackboard. By proper questions the teacher will get some such statement as two lines or two figures are equal because they look equal. At this point the teacher should present some optical illusion to convince the class that it is not always possible to form accurate conclusions from appearances alone.

Convince the class early in the course of the difficulty of making accurate measurements. One way of doing this is to have each of the class draw a line eighteen inches long, using a ruler twelve or fifteen inches long. In testing their work have a measure exactly eighteen inches long. Probably very few of the class will have anything like an accurate length. In this or some similar way they can be led to see the weaknesses in their old methods of reasoning and to feel a need for a better reason for

their beliefs. Don't let the students attempt to give formal proofs until they have attained some appreciation of the purpose of proofs.

When this is attained develop with the class the proof for such theorems as The vertical angles are equal and the bisectors of the vertical angles form a straight line.

Now construct triangles having given certain data, as two sides and a given angle, or two angles and a given side. Use four cases of this problem:

1. When the sides are unequal and the included angle is less than a right angle.
2. When the angle is a right angle and the adjacent sides are unequal.
3. When the sides are equal and the included angle is given.
4. When the two angles and the included side are given.

From this pass to the formal proof of congruent triangles as found in the text.

After a theorem has been proven, whenever possible several simple practical problems should follow so the student will see the application. Such problems can also be made an aid in leading up to the next theorem.

The proofs of the text are excellent examples of deduction. However, if the class are interested, they will want to know how such proofs were discovered in the first place. So it is well to use the analytical method frequently.

The following will illustrate what is meant by this method:

With the books closed and before the class have studied the theorem, draw a triangle on the board, and letter its vertices *A*, *B*, and *C*. (Note — Because of the difficulty of reproducing illustrations the figure is omitted, so the teacher to see what is meant must draw the figure.)

Bisect the side *AB* and letter the middle point *L*. Do the same with *BC* and *CA* and letter their middle points *M* and *N* respectively. Draw *AM* and *CL* and letter their intersection *O*. Now can we discover what relation exists between *AM* and *OM* and also between *CL* and *OL*?

Have these lines measured by some member of the class.

What part of AM is OM? Let us suppose your measurements are correct and that OM is one-third of AM. Can we prove it?

If OM is one-third of AM then what relation exists between AO and MO and also between CO and LO?

The class should see that MO is one-half of AO and that LO is one-half of CO.

Letter the middle points of AO and CO, P and Q respectively. Now what must be proven to establish our hypothesis, namely, OM equals one-third of AM and OL is one-third of CL. It is evident that if we can prove that PO equals MO and LO equals QO we will have established the truth of our hypothesis. It is also clear that more lines must be drawn on the figure before we can prove PO equals MO and LO equals QO. What shall they be?

Here is another place for an hypothesis. Draw whatever lines are suggested and have the one who suggested them show why they will be an aid. If the class have had the theorem that the line that joins the middle points of the sides of a triangle is parallel to the third side and equal to one-half of it, they will suggest that PQ and LM be drawn. Continue to call for suggestions until you get PQ, LM, LP, and MQ drawn.

If the class have had the theorem suggested above they will see that LM is equal and parallel to PQ, and that $PLMQ$ is a parallelogram. If they have not had this theorem then draw another triangle on the board, similar to AOC, with vertices A', O', C'. On this new triangle connect P', the middle point of $A'O'$, with Q', the middle point of $C'O'$. Have the class suggest the relation between $P'Q'$ and $A'C'$ and a way to prove it. Again by measuring, $P'Q'$ will be found to be one-half of $A'C'$. If it is one-half of $A'C'$, then extend $P'Q'$ its own length to R, making $P'Q'$ equal to $Q'R$. Connect points R and C'. Now we see that if $P'Q'$ is one-half of $A'C'$, $P'R$ must equal $A'C'$. If this is true, what kind of a figure is $P'RC'A'$? What parts of the figure do we know to be equal? $A'P' = P'O'$. $C'Q' = O'Q'$. $P'Q' = RQ'$. Angle $P'Q'O' =$ angle $RQ'C'$. From which we see $O'P'$ equals $C'R$ and is parallel to it. Then $C'R$ must be equal and parallel to $A'P'$, and the figure $A'P'RC'$ must be a parallelogram, and $P'Q'$ must be equal to $\frac{1}{2}$ $A'C'$ and parallel to it.

Returning now to the original figure, what relation exists between LM and AC? It is evident that the same relation exists between LM and AC that exists between $P'Q'$ and $C'A'$. So LM

is equal and parallel to PQ and $PLMQ$ is a parallelogram. Since they have proven before that the diagonals of a parallelogram bisect each other, PO must equal OM and LO must equal OQ, which establishes our hypothesis that $LO = \frac{1}{3}\ LC$ and $MO = \frac{1}{3}\ MA$.

Can we take BN and either of the other medians and prove that $ON = \frac{1}{3}\ BN$?

Have the class write out the proof and a clear statement of what has been proven. Then compare with the text.

Some one has stated the analytic method thus: "Consider the problem proven, then find what parts are equal and on what conditions they are equal. Then how these conditions can be established. Continue going back to the beginning and you will find what must be established to start with."

If the teacher does not develop the analytic and inductive method of attack students will fall into the habit of memorizing proofs of the text and will thus defeat the purpose for which this subject is given. Moreover, scientific method, one of the most important things a student should gain from his study of any subject, means the method of discovery, the method of induction, the method of analysis.

And if the students see only the polished deductive proofs of the book they will not be able to discover proofs for themselves. They must see how the teacher discovers a proof, and be led by his skillful questions to make these discoveries themselves.

Now it will be seen that, if this method of procedure be correct, there is an immense importance to be attached to the solution of originals. Essentially the **solutions** of originals must be analytical and inductive so far as mental processes are concerned, though their **explanations** by the pupil to the class may be deductive. After all, perhaps the demonstrations which are fully developed by the book may be more justly considered **illustrations** rather than as so much material to be learned and memorized. Really life's problems are nearly all originals to us. School work ought to teach us how to solve them.

Occasionally it is a good plan, in order to show the importance of preceding propositions and the value of axioms, to have the pupils prove all the propositions quoted in their proof of any one proposition, and again proving any quoted in these and so on until they find themselves back to an axiom. Manifestly this cannot

be done often nor by perhaps more than one pupil in the class at any one recitation, but it will serve to show that after all a few axioms furnish quite a basis for work in geometry.

Too much emphasis cannot be put upon making all the applications possible in the work of the class. Applied geometry will furnish just as good training and much more interest in the work. Exercises involving practical work on the school ground, or in the school building, are very much worth while. Some concrete illustrations may be helpful:

1. For practice in constructing right angles lay out a rectangular plot of ground 500 feet by 300 feet, using no other apparatus or instrument than a tape line. The check will be found in returning to the starting point. Quite naturally even with the most accurate measurement with only a tape line the starting point will be missed slightly.

2. A man wishes to construct a fence, the line of which passes directly through his barn. Plan this so that there is absolute certainty that the two sections of the fence will be in a straight line. Use nothing but tape lines. Of course it will be observed that here again is practice in constructing angles, but this time possibly of another kind.

3. With the aid of only geometry construct a curve out on the school ground. Might one use this method in making a curved cement walk, or drive way?

4. Explain by geometry the construction of Gothic windows and doors.

5. By geometry construct designs for wallpaper or linoleum.

6. Illustrate the use of geometry in making certain kinds of castings or in repairing broken rims of wheels whose diameters are known.

7. Observe the construction of a dwelling, barn, or factory in your community, and with pencil and notebook make notes of where geometry can be used. Discuss these observations next day in class, insisting that the one who took notes shall make it perfectly clear to the remainder of the class how a knowledge of geometry aids in such construction.

8. Explain what geometric principles are involved in some uses of the carpenter's square.

9. Make a list of the articles in your own home in the construction of which geometric principles are involved. Example, design in carpets or rugs.

10. What geometric principles are involved in the operation of a telephone extension bracket?

Such work as above indicated will do much to make the study of geometry intelligible. Its simplicity and its complexity both will be thus recognized.

Not only accuracy of construction and mathematical calculation is desired, but the teacher must insist that there be equal accuracy on the part of the pupils in explaining their constructions and calculations. It is absolutely essential not only that the teacher and pupil **know** what the reciting pupil means, but that the one reciting shall also **say** what he means. The teacher who permits slouchy language is sure to encourage slouchy thinking. There is a psychological relation between thought and its expression. The opportunity for language training in the class in geometry should not be neglected.

Occasionally the teacher might desire to place one of the class in charge of the explanations to be made. If so, let it clearly be understood what good can be really expected to come from it. Such member of the class can scarcely be expected to **teach** very much, though he might be able to **tell** a great deal and check the correctness of the explanations given by the various members of the class. Undoubtedly the one in charge of the recitation will receive much valuable training; will the others? Mere drill work might thus profitably be conducted, but **teaching** is an art and a science, and the state expects teachers to be professionally trained before entering their work. The teacher will therefore be expected to keep a firm grip on the entire recitation even though a member of the class is in charge.

There should always be a justification in demanding that the propositions be put on the blackboard and explanations either written out in full or given orally. The justification is not apparent always, and sometimes the observer raises the question as to whether there is any real aim or purpose in the mind of the teacher who so demands from the class. Merely to have all the propositions of the lesson put on the blackboard and explanations given because the teacher knows no other way of conducting the recitation, seems apparently a very poor excuse for such proce-

dure. Something ought to be **gained** from a recitation. The teacher should always be ready to state just what is expected to be derived from the method of recitation used.

If the pupils all thoroughly understand the propositions and their demonstrations in the text, the time of the recitation might be well used in seeking some practical application of such propositions, or in making some advance on new work. There will still be much that might have been done when the year closes, even with the most rapid advance.

What has been said under method applies equally well to solid geometry as to plane geometry. Equal care should be given to the work in all the ways indicated above. While it is true that the pupils will have had one year of training in plane geometry and therefore are somewhat familiar with the nature of the subject matter of solid geometry, as well as with many terms needed in its study, still it must never be forgotten that a new element enters into this study. The introduction of the third dimension will often occasion difficulties of imagination and thinking which sometimes are not appreciated by the teacher. Time enough to start right and intelligently should be taken, and here as everywhere else no undue naste should be manifested in the desire to cover a great deal of work for its own sake. Progress should of course be made, but it should always be intelligent.

Reference

Smith — The Teaching of Geometry — Ginn.

ENGLISH

Aim — The study of English quite naturally falls into two phases: (a) Composition, oral and written, and (b) literature. This suggests at least two general aims, but it should be understood that the study of composition has a direct bearing upon literature as well as upon expression. Such a study is essential to the understanding and appreciation of literature. It will be observed therefore that these two phases are not mutually exclusive.

That the instruction may be productive of the highest good it is of value to separate and enumerate the several things to be accomplished in a course in English. The following things are set forth as desirable:

1. To understand the essentials of clear and definite expression, oral and written, and to form habits resulting in their continual usage.
2. To acquire facility and ease in communication.
3. To develop ability and skill in the organization of material in the best manner, so that dignity and effectiveness in presentation may be possible.
4. To see beauty in language and literature and to utilize it in oral and written expression.
5. To learn to read sympathetically.
6. To form a taste for good reading which will be a safe guide in the selection of reading material.
7. To have an acquaintance with a few masters in English.
8. To appreciate social and ethical ideals.

If among other things these should be the results of the work in English, a feeling of satisfaction might be permitted. Certainly no teacher of English should think that the aim is purely literary. It would be difficult to justify the existence of the English departments in our high schools on such a narrow basis.

The teacher should be conscious that sometimes we read mainly for **information** while at other times our aim is **inspira-**

tion. Neither should it be forgotten that while every individual does both types of reading, one or the other predominates according to the line of work in which the individual is engaged. The physician who is greatly concerned with the serious illness of his patient reads for information, while the reader of Shelley's To a Skylark seeks inspiration. Recognition of these two types of reading will materially shape the work in English so that the proper aim may be accomplished.

The aim in English as given for the seventh and eighth grades in our Manual and Course of Study for Elementary Schools should be clearly in the mind of every teacher of English in the high school. Proper co-ordination will certainly be lacking without such clearness. Indeed the knowledge that English is really taught in every grade in the schools from the primary to the last year in high school should prompt a desire for a thorough understanding of and familiarity with the course of study in reading, language, and the study of the classics throughout. Until such a condition does exist continuity in purpose and development will be merely accidental.

The strongest desire and earnestness of the most willing teacher of English will be of doubtful value unless that teacher has definitely and clearly in mind just what aim should predominate in instruction in English. It follows also that sound pedagogy can scarcely be applied to aimless instruction. Curiosity prompts the inquiry whether aimless instruction in English and unsound pedagogical procedure do not account for much of the vagueness and many of the woeful results so often observed in English work. Assignments in this subject should be as definite and accurate as in any other subject and directed to the accomplishment of as certain results as exist in the subject of mathematics. Pupils should know as clearly when they have attained these results in English as they do know when they have solved the problem in algebra. Vagueness and unsatisfactory results should raise some questions concerning aims and methods.

Material — The sources of material will be found largely in the following:

1. The adopted text on composition.
2. The list of classics to be read, which are given in another place.

3. Current novels, essays, poetry, etc., as published from time to time.
4. Current literature as found in the best magazines and papers of the day.
5. Histories of English and American literature as the occasion demands.

It is preferable to have these histories as a part of the school library if possible, so that more than one text will be available for the work. If however this be impossible, some of the pupils might purchase one text and some another, so that by exchanging two or three different books will be accessible for class work.

The resourceful teacher will find much material other than that mentioned above. There are available the notebooks kept in the sciences; outlines for reference work in other classes, as history, economic, etc., debates, essays, etc., designed for the literary clubs; short speeches, book reviews, or readings which the pupils may be asked to prepare by some organization outside of the school; weekly community news which may be written for some newspaper; in brief so much material presents itself that the teacher is often perplexed by its abundance.

The realization that work in English should really function in the daily life just as truly as the work in agriculture, will direct the teacher's attention to the various sources of material. The teacher will see that some of the material used will have a purely literary aspect while other will be vocational, depending upon the tastes and inclinations of the various pupils. For example, the individual reading done outside of the class may very properly include books and articles on vocational guidance and those giving information concerning opportunities offered in the various professions and occupations. Such a volume as Booker T. Washington's Up from Slavery will reveal to the pupil the difficulties under which a race labors and the suggested type of education which has too frequently been neglected. Bassett's The Story of Lumber and Cook's A Day in an Iron Works will give valuable industrial information and show the possibilities of the industrial world. Maule's The Boys' Book of New Inventions will give a pupil an appreciation of the wonderful transformations which are occurring and might enable some boy or girl to catch a vision of an apt, successful, and profitable life work. Webster's Calumet K. will give a better understanding of the thrilling acti-

vities involved in such a prosaic thing as the marketing of wheat, and the romance attaching to the building of an elevator. While this book is fiction, its materials and lessons are none the less truthful.

The teacher will recognize that it is quite possible to write books and articles about the real business world in a very excellent literary style. It is not always necessary to float in the realms of imagination or of the unreal and purely visionary to enjoy genuine literary value.

If material for reading may profitably include the vocational, it is only a corollary to have the composition work partake of this nature also in some degree. It will give added zest and interest and bring a realization that compositions have other purposes beside that of merely satisfying the teacher and obtaining credit toward graduation. This will be discussed more fully under method and concrete illustrations given.

Method — It is idle to talk about method where there is no clear conception of aims and no thorough acquaintance with materials attended by broad and masterful knowledge of subject matter. It can not be repeated too often that **content** is absolutely **essential.** To teach English demands other qualifications than simple acquaintance with a text in rhetoric or a history of American or English literature. To know these is good, but the successful teacher must also know **literature** through having read widely and must understand the philosophy of human conduct and human thinking which has been responsible for personal and social ideas.

Knowledge of these things must be more than an intellectual matter; the emotional element must be present, giving rise to strong feelings and noble impulses, to a righteous resentment of wrong and a daring desirous devotion to demand merciful justice in life's activities.

These may be serious demands to make, but they are essential and justifiable. It is entirely too dangerous for the life of society as well as of the individual to permit teachers with less preparation and fitness to teach pupils methods of communication and selection of reading material which determine in a very real sense the type of individual forming a vital component of society. Searching analysis on the part of the prospective English teacher should reveal the strength and weakness of the qualifications possessed and offered for the work.

One may have these qualifications and yet fail because there is no sane method applied in directing the activities of the class. In any case there will be economy of time and effort when good method is followed.

In order that emphasis and concentration might result it is thought best to discuss method under various headings, where concrete illustration may be given.

Composition

The time has happily passed when the word composition connotes painful preparation of several pages upon a theme about which the pupil knows little or nothing, and a formal and dull recital of rules of rhetoric gained through the study of an abstract text in the most uninteresting way. Occasionally, however, one suspects that some teachers do not always act upon the belief of the passing of such a procedure, if indeed the belief is present. Let it be observed that these are recognized exceptions, and, as such, being indicative of an obsolescent method, they are productive of optimism instead of pessimism. It is not that the valuable information contained in texts on rhetoric should not be acquired, but that the **method** of acquisition does not result in the greatest possible good.

The good teacher will have no preconceived notions of how many recitations in compositions should be given during the year with the dates all fixed when school opens in September. Rather will the idea predominate of observing throughout the year just what the **needs** of the individual pupils are, and of providing sufficient opportunities to meet them, whether there be any **regularity** of procedure or not. It is enough to know that there exists **orderly** and **purposeful** development. It is quite possible that good work can be done on Tuesday of one week and Friday of another, or Wednesday and Thursday of still another, if purpose and good motive prevail. Indeed it is quite conceivable that a whole month may elapse without any written compositions at all, or without much attention being given to any text on composition or rhetoric. **Time** is not the determining factor, but **needs** are. It is a wise teacher who will recognize this fact.

One is puzzled sometimes in attempting to determine just why the first lesson for the ninth year class should be the first

few pages in the book discussing narration or giving some review of grammar. This would seem at best only a perfunctory and abstract study. Fundamentally one attacks a task best when he feels the **need** of accomplishing that task. The suggestion naturally follows that the teacher should **discover** the need and the pupils should be made **conscious** of it, before beginning this work. Conceivably then, there ought to be a different method of procedure; not that the essentials of rhetoric or composition or grammar should be neglected, but that their **acquisition** should follow the best **method.**

People are usually interested in a good story. Teachers might well utilize this interest in beginning the year's work in English with this type of study. If the course of study for English in the seventh and eighth grades has been carefully followed the pupils will have become familiar with the structure of the short-story. They already know how to find the introduction, rise of action, crisis (or climax), and catastrophe. They will have discovered the essentials of the short-story and are now ready for a more thorough analysis of these essentials. After the story has been considered as a unit only a little time need be given to the study of the chapter on narration, in the text on composition and rhetoric, where the structure is given in full The teacher uses the text on composition to **illuminate** the story read. In such a text the class readily finds **how** and **why** structure must be considered in narration; and can easily show wherein the story just read meets the requirements or fails to do so. Definitely pointing out certain characteristics in the story and comparing with the accepted requirements will serve to impress these requirements much more forcibly and lasting than merely reading and discussing them in any abstract manner from the text. Thus within a short time can the entire subject of narration be treated.

Perhaps the teacher feels that the paragraph should have some emphasis because the pupils do not fully appreciate its place and function. The starting point will be the story and not the text in composition. Suppose The Ambitious Guest, by Hawthorne, is the story in hand. It is to be read and enjoyed as a whole first. Later the teacher wishes, say, to show by analysis just how Hawthorne produced the desired effect. One thing which will need attention is the paragraph. Suppose the following paragraph is under discussion:

"The simplest words must intimate, but not portray, the unutterable horror of the catastrophe. The victims rushed from their cottage and sought refuge in what they deemed a safer spot, where, in contemplation of such an emergency, a sort of barrier had been reared. Alas, they had quitted their security and fled right into the pathway of destruction. Down came the whole side of the mountain in a cataract of ruin. Just before it reached the house the stream broke into two branches, shivered not a window there, but overwhelmed the whole vicinity, blocked up the road and annihilated everything in its dreadful course. Long ere the thunder of that great slide had ceased to war among the mountains the mortal agony had been endured and the victims were at peace. Their bodies were never found."

Now before the teacher has ever attempted the discussion of the paragraph, the purpose or aim has been clearly seen and understood. The pupils' aim will be somewhat different from that of the teacher. Stated briefly, they will be thus:

Pupils' aim — To understand how Hawthorne produces the effect of horror.

Teacher's aim — To teach the essentials of a good paragraph.

The teacher will have his own order of development which will be determined by the nature of the lesson desired and the manner in which the necessity for a study of the paragraph arose. With these things in mind, the following points will surely be considered in the recitation:

1. Topic sentence — "The simplest words must intimate, but not portray, the unutterable horror of the catastrophe."
2. Essentials of paragraph.
   a. Unity.
   b. Coherence.
   c. Emphasis or proportion.
3. Paragraph may be developed by
   a. Details.
   b. Specific instances.
   c. Comparison and contrast.
   d. Cause and effect.
   e. Repetition.
   f. Combination of the above points.

4. Actual illustrations in this particular paragraph of all essentials, or their absence.
5. The value and use of the text book on composition and rhetoric in checking illustrations found.
6. Illustrations from other places in this story or other sources, and reasons for so selecting. Use editorials or news items, etc.
7. Writing of simple paragraphs which shall contain the essentials, with opportunities of discussing them **in class.**

In the discussion of the paragraph it should be shown that sentence structure is important. Pupils should clearly see that sentence structure is studied not for its own sake but for the sake of constructing good paragraphs, which in turn are for the sake of the larger composition. These purposes are not always clear to pupils; it is imperative that they should be.

It might appear from what has been suggested above that there is danger of neglecting the story for the treatment of the paragraph and the sentence. Only the teacher who does not see the importance of the understanding and enjoyment of the literature in hand will permit composition in its elements to destroy these two essentials. Discussion of paragraph, sentence, etc., will come **after** the story as a unit has been completed, or along with its study only **so far as seems necessary for the understanding of the story.** Then there is motive on the part of the pupils for the study of the paragraph, sentence, etc.

Nor should it be considered essential for the class to know all about the paragraph, sentence structure, and many other things belonging more strictly to composition, **before** reading literature. This suggests a further study of these things from year to year as necessity indicates. As children talk years before they are conscious of the rules of grammar, so they read and enjoy long before they ever hear of rhetoric or composition. The study of these formal rules is intended merely to **add** to their understanding and enjoyment. The teacher who permits these rules to obstruct and destroy is offending against the pupils. It ought to be of significance that **rules** of composition came only after there **were** compositions; that is, after there was a body of literature.

The teacher should not be discouraged therefore that the suggested method of acquiring rules of composition and of de-

veloping ability to express does not permit these things to be mastered **before** the study of literature. Nor does this method permit composition as such to be completed in any one year, but only as a **result** of the four years of high school work. In short, composition, oral and written, accompanies the reading of literature, and the pupils therefore find **uses** for the things acquired.

Composition must be interpreted to include both oral and written. The work in oral composition will increase in importance and quantity through the high school course, and written work will decrease. Reflection indicates the important place conversation occupies in life and the consequent necessity for oral work in school in preparation for it. This indicates that there should be **conscious** opportunities for its development.

Frequently the teacher might indicate that at the beginning of the next recitation in English, some particular pupil will be expected to give a comprehensive review of the preceding day's lesson or even of those lessons for the few preceding days, especially if they were a series of lessons on some one phase of the work. Let it be understood that the pupil will be expected to make special preparation and to speak for several minutes in connected discourse. Refusal to accept anything but the pupil's best will usually bring **results.**

Good training can be secured from a summary of the day's lesson, some pupil having been designated in advance. In a summary a different type of work is being required demanding a keener and more rapid mental activity. Yet this type of training is so often demanded in life that particular attention should be given it.

An item of news, a digest of a paragraph or two from some paper, magazine, or book will likewise afford training in oral expression. If pupils understand that at such times they are expected to do a little better than usual, and that special preparation must be made, their development will be definite and marked.

Caution should be given at this point because too often teachers require entirely too long compositions, oral and written, before pupils are able to construct them. Even after they have had some training in this it is frequently unwise because pupils are disgusted in composing lengthy ones and teachers are equally disgusted in correcting them. This work, as all other, must be made useful and practical, and therefore pleasant and attractive. One paragraph well written or spoken and discussed **in class** is

worth many carelessly written and given in class without comment. When time and the ability of the pupils permit, gradual extension in length and complication will encourage pupils and give good results. Book reviews and work of like nature may then be attempted orally before the class. This training is excellent, but should be undertaken when pupils have sufficient development to do so intelligently and with pleasure.

In written and oral composition care should be taken so that reasons for the procedure are clear to all. It is a waste of time leading to pernicious habits for teachers to permit comments upon work given in class without stating reasons for such comments. Pupils should be taught to give more than the general and vague comment of "That paragraph was very good." Certainly the one giving the paragraph or longer composition has a right to know **why** it is good, **why** it is deficient, and **wherein** it meets or fails to meet certain accepted standards. Isn't it fair to presume that the text on composition would prove valuable in judging compositions? Why should not pupils be compelled to use the standards thus provided instead of making the unintelligible and empty criticism of "That was very good?" Do we develop essentials and standard of measurements only that we might immediately neglect them?

Of equal importance is the discussion of the topics which are to enter into the composition. Intelligent attack is of tremendous worth and encouragement. An entire recitation period used for the discussion of the assigned subject with the various divisions which naturally follow will be time well spent. Nor should this be a discussion by the teacher alone; pupils should have a very large share in it. It should be recognized that the **gathering** and **arranging** of material must always precede the **expression.** This distinction is not always kept in mind. It is quite as valuable to awaken thought in the **preparation** as it is in the **expression.** The pupils having been given a vision of the **possibilities** of a subject or topic for composition will be somewhat assured of a **probability** of its development.

Co-operation

For years teachers have agreed upon the **principle** of co-operation in English, but have failed in a large degree in its **practice.** Without further delay it should be an accomplished fact. This co-operation must be **by** the teacher of English as well as **with**

him. Plenty of composition work is required by teachers in history, science, and other subjects; why should not this work form a legitimate part of the work in English? It is only a question of **administration** and **organization** and not of propriety. Some practical suggestions should be of assistance.

1. The teacher of Latin has an excellent opportunity in assisting the English teacher, particularly in the acquisition and extension of vocabulary. There is ample opportunity for increasing knowledge of the distinction of the finer shades of meanings of words. Observation of how Latin writers use these distinctions should lead to intelligent use by the pupils. Not only will the pupils thus be able to express their thoughts with finer accuracy, but their expression will have a culture and refinement which will certainly re-act upon their own personalities. Written reviews of Latin translations can be used by the teacher of English to observe how much improvement in expression is resulting from the work in English.

2. In ancient history there is much available material for debates, oral discussions, and for dramatizations. The stalwart and heroic characters in Greek and Roman history might well be utilized in short plays written by the class with the guidance of the teachers of English and ancient history. In costuming it will be quite convenient to have the assistance of the teacher of domestic art, while the manual training department will find use for its services in simple stage scenery and settings. Before the English teacher engages in this type of work of course the elements of the drama must be clearly in the minds of the pupils.

A reproduction of the Roman Senate will give training in poise and delivery, which is highly desirable, while the history teacher will be elated with the chance to impress facts of Roman history.

The Olympian Council in session with a number of the Greek deities present will provide training in **search** for material concerning the Olympian Council and the Greek deities as well as the **organization** of that material so as to tell the best possible story. It will be quite difficult for the pupils to decide just in what phraseology the deities would speak as well as what would form the material of their conversation. How would Juno talk, to whom, and about what? Would Mars and Venus both be present at the same council, and if so what would form common topics of conversation and discussion between them? Would there

be the same dignity present in the language of all the deities or would there be some whose language would be free from it? Would the discussions be sober and solemn or would there be some humor manifested? If there be humor and fun, what deities would be most likely to exemplify it? Would their associations and parental training be factors in determining this? A thousand other questions will arise with the attempt at holding an Olympian Council. Neither the history teacher nor the English teacher will be confused because of the dearth of material, but rather because of its superabundance. There is thus ample training in oral and written expression.

In modern history the Congress of Vienna affords a striking illustration of the possibilities for oral and written English. Who were the great statesmen of Italy, France, England, Germany, and Austria who made the map of Europe in 1814, and also made possibilities for war a hundred years later? What would form the subjects of their speeches and the material for their discussions? What place would the dramatic have in their debates, and who would likely be the most dramatic statesman? Would argument and wit, with grim irony and sarcasm, form the type of discussion? Would there be eloquent oratory founded on strong sentiment or racial hatred? What part would malicious treachery play in this congress? Would any one statesman be able to understand the ulterior motives and purposes of another? If so, how would that affect the debates and discussions? Here again is a wealth of material and a splendid occasion for co-operation.

American history teems with possibilities similar to those indicated above and many others. Perhaps in no other country since the time of Greece do conventions and associations of various kinds, assemblies of pleasure and profit, form such a vital portion of a nation's life as they do in America. There is an abundance of literature, poetry, and prose, which can be utilized in depicting and portraying scenes of our own country. In attempting this sort of thing we are struck with the significance of oral expression in our own activities, social, political, religious, educational, and industrial.

The study of history of any kind demands the ability to outline, organize, and arrange material. It demands the ability to recognize the topic sentence of a paragraph, to group the related paragraphs, to see the chapters in proper perspective, and the

whole subject of history as a developing unity. The teacher of English ought to welcome the opportunity and discharge the duty of teaching the pupils just how to do all of this work. Instead of talking abstractly about the outline or brief as given in some text on composition, it would be far more valuable and interesting and impressive to outline a chapter in the text in history or make a brief of the speech of Lincoln, or Webster, or Gladstone. When pupils are shown that men actually use the outline or the brief or the summary, they have a healthier respect for the instruction in these things in school. Insistence on recitations which exemplify good paragraphs, good organization and arrangement of material, ought to be appreciated by other teachers than teachers of English.

3. Notebooks of whatever sort, glanced over hastily, ought to reveal to the teacher of English whether there is any attempt on the part of the pupils to make use of the knowledge of the structure of sentences, paragraphs, compositions, organization and arrangement of material, neatness and care, etc. Such material can easily become burdensome to the teacher of English, but if it is not read accurately and with painstaking care and considered only as indications and illustrations, it will not consume a very large portion of time and energy.

4. Carelessness in speech or writing, even if it occurs in other classes than English, should be immediately noted by the English teacher, and such habits corrected, if need be, by special drill upon those things in which there shows deficiency. Of course this presumes that the science teacher, or teacher of mathematics knows what constitutes good English structure. Not that they need to keep in mind a host of technical rules that belong only to the classics, but that they must know when a thing is said with clearness, precision, force, and intelligence. Where such co-operation exists we will understand that the English teacher is a vital force in any school and that this teacher has a part in the improvement of the daily conversational and useful English as well as in the acquisition of those rules which apply to discourse of a distinctly "bookish" nature.

5. Subjects for oral and written composition selected from the fields of science, language, civics, economics, commercial geography, etc., will contribute much towards co-operation. The following are indicative of the possible types:

How a knowledge of chemistry assists the housekeeper.
Gas in the home for fuel and light.
The desirability of purchasing food in large quantities.
How to judge the quality of muslin.
Proper clothes for a girl in high school.
Increased use of tractors in farming.
Useful knowledge about automobiles.
What a farmer should know about marketing wheat.
Conservation of water supply.
Some difficulties in regulation of prices by the government.
Operation of the initiative and referendum in Ohio.
Atrocities of the World War.
How to make a household budget.
Making a budget for the operation of the schools.
Desirability of being a physician.
Possibilities of the course of study in our high school.
A laughable incident in the physics laboratory.

6. Co-operation by other teachers in the high school will be very materially encouraged if they believe the demands of the English teacher are (a) reasonable, (b) definite, (c) worthy, (d) feasible, and (e) practical.

If the English teacher sees only the grammatical errors in the compositions submitted, there is likely to arise a suspicion that the demands are not reasonable or worth while. The teacher of physics will soon tire of correcting punctuation when pertinency is more important. Unless pupils are taught in the English class that it is necessary **to have** ideas before one attempts to **express** them; unless they learn that simplicity and clearness in the language of ordinary conversation is even more important than beauty in the most stately and dignified poetry, the teachers of other subjects will soon doubt the worth of the instruction in English. If the teacher of physics knows that the class is learning the essentials of an outline in their study in the English class, he will welcome the opportunity to apply and enforce these standards in his own work. If the teacher of history knows that the class in English is learning how to select the topic sentence in the paragraph, and how paragraphs may be developed, he will be

anxious to insist on the **application** of this knowledge in his own classes.

Let it be understood therefore that the teacher of English can do much to encourage or discourage co-operation by other teachers. His own eyes must see more than the use of "are" for "is," more than the neglect of a pupil to indent his paragraph. He must see these of course, but unless he sees more an optician should be consulted to secure **vision.**

Literature

Appreciation of literature is not only an intellectual **but also** an emotional process. Too frequently the recitations indicate that the pupils and teachers believe that the study of literature deals only with the intellectual aspect. This is revealed in the type of question asked by the teacher, in the painful analysis of sentences and paragraphs, in the attention given to the grammar of the selection, in the emphasis given to the collection of facts historical and biographical many of which have no connection or relation to the classic being read. The sooner it is recognized that the **emotional** element must be present in effective work in literature the sooner will pupils be given their just share in the appreciation of the great body of literature which is theirs by rightful social inheritance. The sooner it is recognized that **feeling** is an essential in doing, the greater the assurance that the boys and girls will perform their parts in society with credit and honor.

Right **feeling** quite as often as right **thinking** is productive of right doing. It is true of man that "as he thinketh in his heart so is he," but who shall say that the emphasis is upon "thinketh" more than upon "heart?" It is true that thoughtful action is important and quite essential to human and social welfare, but it must be remembered that thought often is the result of strong feeling. Many persons have been moved to the performance of noble deeds because of their having read good articles or good books, or of their having witnessed some well executed play. The strong and stirring appeals thus made to the emotions initiated **thinking,** which culminated in right action. We do not need less attention to the intellectual; we do need more to the emotional.

The material read in high school lends itself to emphasis on the emotional as well as on the intellectual. Even a hasty glance

will show that a strong emotional appeal is present in drama, novel and short-story, epic and ballad, lyrical and idyllic poetry, essays, biography, speeches, and orations. It would be interesting to inquire from the pupils who have read Carlyle's Essay on Burns or Webster's Reply to Hayne how much the emotions were stirred in their study. It would be easier for them to recall the historical allusions required or the amount of dull and lifeless oral reading of passages or the number of assignments made which included the collection of information and facts more adapted to a place in the museum than in a recitation of literature. How much do the pupils know about the essential elements of an oration **as they see them exemplified in the orations** studied in class? Can they select passages from the orations which illustrate these essential elements? Can they listen to an address and tell whether it is an example of high-class oratory or of bombast instead? But if these boys and girls have never been stirred deeply as they study orations, and have never felt the dignity, beauty, and strength of the language, they will be less able to distinguish the true from the false.

In this connection it should be clearly understood that there is a place in high school English for a real study of the oration as a type of expression. Pupils should be taught the real essentials of the oration. A careful study of this topic **in connection** with the reading of some oration of Webster or Burke should be illustrated. The various occasions calling forth these types should be understood. The place of the oration in American life should be seen. Time and attention devoted to this study will bring desired results. Too many teachers neglect this phase of English or give only superficial instruction. Either one should be condemned in strong terms.

Very certain is it then that the teacher of literature should somehow be an interpreter as well as an instructor.

The consciousness of the necessity of being an interpreter will assist in really being one. It will tend to put the teacher in an attitude of looking for the things which really are worth while interpreting. It will emphasize the importance of knowing the possible interests inherent in the reading material and also the possible and varied interests of boys and girls. It will consider the different interest at different ages, of different environments, of different previous training, of different communities. It will suggest the understanding of the philosophy of society and the

individual not only for the sake of the book read, but for the sake of the pupils reading. The philosophy in many of Scott's novels may have appealed to the people of Virginia and South Carolina and Georgia, but certainly did not appeal in the same way nor for the same reason to the people of Massachusetts and Pennsylvania. A proper study of Ivanhoe should reveal why it appealed to the one section and not the other. There is a philosophy in Ivanhoe, but there was also one in the people of Virginia. A knowledge of both is necessary. To be a good interpreter demands knowledge of what is being interpreted as well as a knowledge of the people for whom it is being interpreted. To be a true interpreter therefore requires that the teacher be a philosopher, not in any pedantic sense, but in a very liberal and practical sense.

It must ever be kept in mind that philosophy is a changing thing, varying not only with nations but within nations themselves at different periods. He who would presume to understand American and English literature must first of all realize that America and England have had fundamentally different ideals of education, church, and state. The literature of each nation therefore must of necessity reflect these different ideals. Scott's Ivanhoe has for its basis an ideal entirely different from that upon which Cooper's The Pioneers is founded. The one with feudalism as its basis is in sharp contrast with the other, which has for its foundation the spirit of a new democratic state in a wide and seemingly unlimited expanse of land. But there is an equally sharp contrast between Scott and Dickens. A great error would be committed therefore in judging the philosophy of England's literature entirely from a study of Scott. Yet again Dickens hardly represents truthfully the England of today. The student of literature, be he teacher or pupil, must therefore be mindful of the transient nature of the philosophy of a people.

Quite naturally all this suggests a wide reading of literature itself on the part of the pupils. To know the types of novels, to know their essentials and purposes and lessons, will have as a corollary the wide reading of many novels. Such an understanding can not be gained by the study of a single one, as Silas Marner. However good Silas Marner may be in arousing an appreciation of the novel as a type of literature, that appreciation can be fully developed and satisfied only by the reading of several other novels. Even if a very keen appreciation be developed by

Silas Marner, pupils must read others or feel unsatisfied. To **create** an interest and appreciation and not to provide for their **satisfaction** is, to say the least, a curious procedure.

Books must necessarily be accessible to pupils if such a type of work is to be carried on. There ought to be a large number and assortment of books in the high school library to meet in some measure these requirements, but it is a mistake to assume that **all** the literature read must be possessed by the school, even if finances permitted. Material for the wide individual reading may be secured from the community library or from families in the community. There is no reason why two or more pupils should not exchange books for reading outside of class. There is very good reason why pupils should build libraries of their own. Surely such possessions are legitimate results of the teaching of literature in school. Surely the most formal teacher of English would have no objections to the increase of the number and size of private libraries. Surely the increase of the number of good magazines in the homes of the community would be a commendable thing. Surely any teacher of English would be gratified to have this school work function in the life of the community at least to such an extent.

Neglecting for the moment the opportunity for good work in oral English which would result from reviews of good books, poems, magazine articles, etc., given by the individual pupil before the class, who can measure the tremendous impetus that might thus be given to its members for good and wide reading? A well prepared review of Scott's The Heart of Midlothian might do more to create an interest in, and a desire for reading, others of Scott's works than any insistence on the part of the teacher.

The individual reading which is done outside of class, but still under the direction of the teacher, ought to develop independent readers. This should be the result of the reading of literature in class, for here the pupils are taught how to analyze books, for what things to look, just what explanatory material should be secured and how to find it, how to carry in mind the essentials and development of the selection as an entire unit. But the amount of reading done by the pupils should be more than can be utilized in class in reviews. The teacher should keep in touch with what is being read by holding private conferences with the individual pupils. These conferences should be frequent and short, just enough to show that the outside reading is being

done with intelligence and resulting in the greatest profit and pleasure. Conservation of the time of both teacher and pupils is important. Occasionally the period for recitation might legitimately be used for such conferences. Of course the teacher will keep a record of the reading to the advantage of all concerned.

To be sure, it will be kept in mind that pupils have other work than just English to prepare, and only a fair proportion of time can logically be required for English. But boys and girls read **something** for pleasure, and it is this reading that may well be counted for the supplementary work in literature. It is hardly probable that boys and girls will do much work in algebra, or geometry, for mere pleasure outside of class, and it is just in this respect that the work and opportunity of the teacher of English differ from that of so many other teachers. If a wide range in choice of reading be permitted, but without any lowering of standards, it will result in securing an abundance of individual reading of the right type. It is high time that the work in literature take this practical turn. The study of a classic should be undertaken with some definite things in the mind of the teacher. Merely to read the classic will insure missing much information and more pleasure. It certainly is part of the teacher's responsibility and duty to show pupils how to get the most out of books. Again therefore arises the question of why pupils should know unless they are **taught.** To condemn a pupil because he has failed to understand a classic certainly does not insure his doing so at another time. If pupils knew all things, there would be little occasion for the expenditure of public money for teachers. Often the best teacher condemns himself first and the pupil afterward for any failure.

Preparation of the pupil **for** the classic is a part of the teacher's business. This may be concretely illustrated by using Silas Marner as an example.

Teachers do not always appreciate the difficulty which pupils sometimes have in reading through the first few pages of a novel. Having read the entire novel, the teacher, being conscious of the plot and episodes and characters, often forgets that pupils do not have the same motive as the teacher in reading through the introductory portion. As soon as the action in Ivanhoe begins, it is easy enough to follow the story, but many a pupil becomes discouraged by the many pages of description preceding. It is clear enough after finishing the book why Scott wrote so much

before the action begins, but it is not so apparent to the one who is just learning how to read the great authors.

The suggestion naturally comes, therefore, that some preparation **of the pupils** is never amiss and **may be** quite necessary. So far as Silas Marner is concerned, the teacher might arouse interest on the part of the pupils if the **essentials** of the first two chapters were given by the teacher in good story form. No one can tell another how to relate a good story. The **spirit** with which it is done, the **enthusiasm** of the narrator, the **language** in which the story is couched, the **voice** of the one telling the story are all factors in securing good results.

Not only should the essentials be told, but much will be gained by the fitting illustrations given by the teacher. If the teacher understands the philosophy of Silas Marner, it will be an easy matter to select such illustrations from experience, and such facts from the first two chapters as will give the proper atmosphere. Being conversant with the life of George Eliot and the time in which she lived will enable the teacher to weave interesting and related material into the story.

It is not the purpose of any preparation to reveal all the plot and thereby kill, effectually, any interest the pupils might otherwise have in reading the story. It is a wise teacher who knows just when and where to stop. When the story has been clarified, when vagueness has been eliminated, when interest has been aroused, then the teacher can feel that a good beginning has been made.

There is no intention of taking away from the pupils the pleasure of reading the first two chapters, and it is to be understood that the pupils shall read them entire. The teacher's aim is merely to interest and clarify so that the reading may be done with pleasure and intelligence.

What preparation should be given in beginning the study of Silas Marner can best be determined by the teacher who knows just what preparation is necessary. It should be clear, however, that **Silas Marner** should be the starting point and **not** the **biography** of George Eliot, nor the history of the time portrayed in the story.

After the necessary preparation has been given for a pleasurable and profitable reading, the entire story should be read by every member of the class. **Only when this is done** will there be any attempt to study the story in a serious way in class. The

logical method is to treat the story as a **unit** and not in small sections. One way of beginning such a serious study is to give attention to its structure as a typical novel. Now will come a careful division into Introduction, Rise of Action, Crisis, and Catastrophe. By the time these have been carefully selected, there ought to be a good familiarity with the essentials of the story. To do this well will mean two or three lessons and developed **by the class.** As is stated in the Manual and Course of Study for the Elementary Schools (which see), an excellent starting point, if indeed not the best, will be the Catastrophe, where something happens.

When Silas Marner has thus been studied for a few lessons, other things in the novel should be considered. Such discussion as will have naturally arisen in the study of the structure must lead to a number of queries. Among the first of such will be how well this novel meets the most rigid requirements for this kind of literature. Sufficient time should be given to understand this question. It should be shown (1) that there are certain very definite standards which novels must meet and (2) that Silas Marner meets them all. Here again will be an opportunity to refer to the text in composition and rhetoric and test Silas Marner by the things there are stated: what a good introduction is; what specific things it should contain; what are the essentials of rise of action, crisis, and catastrophe; illustrations of each of these things found in the story, showing clearly and specifically how the illustrations fit with requirements contained in the text in composition and rhetoric. This kind of study will necessitate a few lessons sufficient in number to leave no vague feeling either about structure or the exactness with which Silas Marner meets the requirements. In short, it should show that Silas Marner is an excellent example of the **novel as a type of literature.**

One can not read Silas Marner with care without observing that George Eliot is a great psychologist. Indeed Silas Marner is a psychological novel. In this story the author with rare skill reveals the inmost working of the human soul of Godfrey, for example, and how easy it is for it to develop along the lines of least resistance. She shows how conscience can at times be all but smothered, yet still have enough vitality to censure the man and rebuke him for his cowardice when courage should have been manifested even at the cost of a terrific struggle.

How carefully in the first few pages George Eliot suggests that Godfrey was troubled. "There was something wrong, more than common — that was quite clear: for Mr. Godfrey didn't look half so fresh-colored and open as he used to do." At the close of Chapter X anxiety is prodding him and we almost sympathize with him in his dilemma. This sympathy is increased a trifle as we recall that George Eliot, in the closing paragraphs of Chapter III, shows how "The yoke a man creates for himself by wrong doing will breed hate in the kindliest nature." Godfrey was clearly conscious at times of his own folly and weakness, but still he, and we too, can see how a trap had been laid for him in his marriage with Molly. His mental torture as portrayed in the scene of poor Molly's death is contrasted in the feeling of relief which comes over him at her death. He is swayed by different sets of emotions, and George Eliot shows them to us clearly, so well did she understand human nature. How well we see his feelings as he wonders if Molly is really dead: "If she is, I may marry Nancy and then I shall be a good fellow in the future." "She may live, and then it's all up with me."

What an excellent student of psychology has shown old Silas losing faith in God and man, yet retaining that sense of love which revealed itself in loving his gold because he had nothing else to love. In the opening paragraph of Chapter V George Eliot shows us that she understands the importance of habit, and the ease with which certain habits are formed. So carefully is the development of old Silas traced that we marvel at the exactness with which it is done, and are ready for the revival of his faith in man by the renewal of human associates.

The exceedingly keen insight of Dunstan into the workings of Godfrey's mind shows again how well George Eliot understood her psychology. There is a world of suggestion in the argument by means of which Dunstan justifies the stealing of the gold. We feel that there is a tragic awfulness in the words with which the author ends Chapter IV and with it the life of Dunstan: "So he stepped forward into darkness."

If pupils really understand what is wanted in trying to show what kind of psychologist George Eliot was, they will take delight in multiplying illustrations similar to those cited above. It is worth while to know that the author of Silas Marner worked with a definite plan in mind. It is worth while for pupils to

learn how to analyze the mind of the author through the revelations made by her characters.

The philosophy of George Eliot is interesting to note in this study of Silas Marner. Of course one is confronted in this novel, as in her others, by the philosophy of positivism. This philosophy believes that the human mind can not inquire into **causes** but must content itself in the discovery of the **laws** of **effects.** A simple explanation will be sufficient for the study of Silas Marner, and boys and girls of high school age can understand all that is necessary for the interpretation of this philosophy as George Eliot has revealed it. A careful study of the religion of Dolly Winthrop will show that positivism is its basis. To her religion is a matter of **feeling** and not of intellectuality.

"Well, Master Marner, it's niver too late to turn over a new leaf, and if you've niver had no church there's no telling the good it'll do you. For I feel so comfortable as niver was when I've been and heard the prayers and the singing to the praise and glory o' God, as Mr. Macey gives out, and Mr. Crackenthorp saying good words, and more partic'lar on Sacramen' Day; and if a bit o' trouble comes I feel as if I can put up wi' it, for I've looked for help i' the right quarter and gev myself up to Them as we must all give ourselves up to at the last; and if we'n done our part, it isn't to be believed as Them as are above us 'ull be worse nor we are and come short o' Their'n."

Positivism runs throughout her novels, and can be illustrated in many places in Silas Marner. Notice the sadness that surrounds the death of Dunstan and Molly. Not a suggestion of future punishment or future happiness. Not a suggestion of future life. Death ended all for these two. George Eliot's positivism leads her to agnosticism. Not **knowing** that there is a future life, she did not even postulate one. To George Eliot the death of an individual was the extinction of a human soul. Dunstan "stepped forward into the darkness." Molly dies alone and friendless. Not having been a lovable character with golden deeds to her credit, she can not even live in the good memories of her life associates, which was the only way a soul might live after death, so far as George Eliot was concerned. This kind of eternity can be seen from the following quotation from her The Choir Invisible:

"Oh may I join the choir invisible
Of those immortal dead who live again
In minds made better by their presence: live
In pulses stirred to generosity,
In deeds of daring rectitude, in scorn
For miserable aims that end with self,
In thoughts sublime that pierce the night like stars
And with their mild persistence urge man's search
To vaster issues."

The Latin quotation standing at the head of the poem as if it were her text and motive for it, translated is "That long time when I shall not exist moves me more than this brief existence."

Other illustrations of her positivism can be found in Silas Marner. Boys and girls will delight to find them if shown how. They soon will understand that George Eliot was as good a philosopher as Comte and Spencer and excelled them in her ability to take philosophical principles and apply them to the actual life of individuals in her characters. She wove these principles into human action. The teacher should guard against the possible tendency of the pupils to accept the philosophy of positivism. It is not accepted as a true philosophy by the best thinkers of our day. Or rather should it be said that the shortcomings of positivism are many indeed.

George Eliot's philosophy also ascribes moral consequences to human conduct, as shown in Godfrey and Molly, yet she teaches also that sin is social as well as personal. Environment influences the formation of the characters of Godfrey and Dunstan. A stern and thoughtless father and the absence of a mother determined the character of these boys in a very definite way. Because society permits certain things to become a part of environment it must bear the responsibility for this environment in its influence in human character and human destiny. George Eliot's philosophy is suggested by the words environment, tradition, experience, heredity, altruism. Search in Silas Marner will be rewarded by evidence of them. Always "The soul that sinneth, it shall die."

The doctrine of retribution exists in George Eliot's works, and it would be a very interesting study to trace it in Silas Marner. Dunstan, Molly and Silas all illustrate it. Have the pupils to show how. Notice how Godfrey suffers. Nemesis seeks him

untiringly and relentlessly. When he would marry Nancy, Nemesis reminds him of his marriage with Molly. When he would have children in the home, Nancy was childless. At one time he could have acknowledged Eppie as his child, but did not; when he would own her in later years, she refuses to be owned. For their own moral enlightenment as for their own interest, boys and girls might well search for all the evidence and illustrations of the work of Nemesis in her eagerness for retributive justice.

Opportunities and suggestions abound for the use of the history of English literature in connection with the study of Silas Marner. What kind of woman was she who could write this? Who was she that Emerson could write, "The first man I have even seen?" Why does she write with so much intellectuality and philosophy when we have a right to expect a woman to write with the heart as well as with the head? Why was she so amply able to portray so effectively the psychology of her characters? How much of autobiography is there in Silas Marner? How much in any of her works? How much in her poem, Brother and Sister? What experiences in her life enabled her to describe with such accuracy the simple folk which she introduces in Silas Marner? These and numerous other questions will naturally arise in the minds of both pupils and teachers as they study Silas Marner. To answer all these it is necessary to turn to the history of English literature.

Note, however, that the story comes first. It motivates the study of the life and times of George Eliot, which study must come only as a **result.** Coming so, it then has meaning. It must be pursued only so far as it illuminates the discussion and understanding of the story. Information and facts, biographical and contemporaneous, are secured for **reasons** pertinent to the intelligent study of Silas Marner, not for their own sakes.

Granted that in exceptional cases we become interested in an author's works because of some striking peculiarity or eccentricity or unusual event relative to his life, there still remains the fact that it is the exceptional way. Rather do we become interested in the **author** through a study of his **works.** Boys and girls have a right to this same approach.

Many biographical books and critical studies in the works of authors are excellent literature in themselves. Care in selection will insure good results. It would be very much worth while to interest pupils in George Eliot's life, causing them to read

many of the excellent studies of her life and works which have been written. They are excellent literature in themselves and not only furnish pupils with high-class reading, but also will inspire higher ideals of human rights and duties.

These things suggested above are best accomplished, not by lectures by the teacher, but by raising problems to be solved. Suppose, for example, it is desired to trace George Eliot's use of Nemesis. The problem might be stated: "How did George Eliot use Nemesis to reform Godfrey?" Here, as always, the teacher will draw the organization of it from the class through discussion and questions. It will be found necessary to consider the following things:

I. Meaning of Nemesis.

II. Godfrey's actions.

A. How they affect himself.

1. .....
2. .....
3. .....

B. How they involve others.

1. .....
2. .....
3. .....

etc.

C. Illustrations of his worthy and unworthy actions.

1. .....
2. .....
3. .....

III. Nemesis at work on Godfrey.

1. .....
2. .....
3. .....

etc.

IV. Conclusion.

In reciting from such organization of material, the teacher should insist upon the pupils showing just how each of the topics bears upon the problem. Doing so prevents the necessity of so

many questions by the teacher, develops close and logical thinking, gives good training in oral expression, adds pleasure and effectiveness to the recitation, awakens good inward reaction on the part of the pupil. Such an outline as above ought to furnish material sufficient for several recitations. A live and resourceful teacher will find plenty of opportunity for snappy, vigorous, and pleasurable recitations. The teacher who does not care to think or to cause the pupils to think or to enjoy would do well to cling to the old method of reading page after page of the story and asking a few perfunctory questions. This will insure a quiet and unprofitable time during the recitation period.

It is not necessary to multiply illustrations of how a live teacher can use literature for profit and pleasure, but such treatment as suggested above will necessitate much knowledge specific and erudite. There is no escape. Success or failure will depend upon it. A knowledge of the philosophy of Hawthorne is prerequisite to the appreciation of his novels and short stories. Poe's stories are filled only with superficial and foolish accidents and incidents unless there is an understanding of **skill.** Tennyson's poems are merely merry jingles or rhymes or dull, prosaic blank verse unless his philosophy is studied. It is high time for a display of worthy and definite purposes and aims, exemplified in good teaching. Only thus can there be developed discriminating pleasure in the study of literature.

If the pupils in the literature class could be made to realize that good poetry is still being written, much would be done to remove that artificial atmosphere that surrounds its study in class. Too often the study of poetry deals only with that written years ago by authors who are no longer living, with the result that no point of contact is seen between poetry and life. Can it not be shown that poetry does perform a function for a people by reference to current literature? Surely if teachers and pupils would only consult the current magazines during the World War the result would be speedily accomplished. Who shall say that the following are not illustrations of good poetry having a place in American life?

To show how literature is a reflection of national life, influenced by the engrossing problems of the day, one can scarcely do better than to note such productions, both prose and poetry, of the period of the World War. Is it necessary to read in a text on the history of literature to discover this? The text

might add illustrations as proof, but the fact itself can be shown by search and observation of current literature. The first three appeared in Everybody's Magazine for January, 1918.

THE JUST CAUSE

By Herman Hagedorn

There is a Light where'er I go,
There is a Splendor where I wait.
Though all around be desolate,
Warm on my eye I feel the glow.

The fight is long, the triumph slow,
Yet shall my soul stand strong and straight:
There is a Light where'er I go,
There is a Splendor where I wait.

My enemy is strong, I know,
His arts are sly, his guns are great.
I do not fear him or his hate.
In fog, in darkness, gropes my foe.
There is a Light where'er I go.

IN FLANDERS FIELDS

By Captain John McRae

In Flanders fields the poppies grow
Between the crosses, row on row
That mark our place, and in the sky
The larks, still bravely singing, fly,
Scarce heard amidst the guns below.
We are the dead. Short days ago
We lived, felt dawn, saw sunset glow,
Loved and were loved, and now we lie
In Flanders fields.

Take up our quarrel with the foe!
To you, from falling hands, we throw
The torch. Be yours to hold it high!
If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders fields.

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SONS

By Sara Teasdale

Men in brown with marching feet,
Like a great machine moved down the street,
And the shrieking of a fife
Led that river of young life,
Soldiers bearing kits and guns,
Mothers' sons — mothers' sons.

Out of the crowd a woman pressed
Forward a little from the rest.
"That's him," she said, "the third one there,
The third one with the light brown hair!"
She caught my arm and then she swayed
And whispered — I suppose she prayed.
And still they passed with kits and guns,
Mothers' sons.

The following was published in The Outlook for January 9, 1918:

RIGHTEOUS WRATH

By Henry Van Dyke

There are many kinds of hate, as many kinds of fire;
Some are fierce and fatal with murderous desire;
And some are mean and craven revengeful, selfish, slow,
They hurt the man that holds them more than they hurt his foe.

And yet there is a hatred that purifies the heart,
The anger of the better against the baser part,
Against the false and wicked, against the tyrants' sword,
Against the enemies of love, and all that hate the Lord.

O cleansing indignation, O flame of righteous wrath,
Give me a soul to see Thee and follow in Thy path!
Save me from selfish virtue, arm me for fearless fight,
And give me strength to carry on, a soldier of the Right!

The following poem was published in The North American Review for September, 1917:

THRENODY

By Winnifred Welles

I have never known anyone so proud,
So fierce for faith, so strong for nobleness,
I never heard you whine nor cry distress,
Nor saw you kneel nor knew your bright head bowed.
Dreams, Love and Laughter were a swift, white crowd
Of wings flashed upward from your loveliness —
You carried Truth, wore Honor as a dress,
And wound yourself in Beauty like a cloud.
Surely this is not you who lies so low,
Smitten as others, yielding as they must
With abject hands and smooth, submissive head —
All fire and glory crumpled by one blow,
Bewildered and beaten and brought to dust,
This is not you, oh pitiful and dead!

Current Events

All agree that current events should be utilized in school work, but it does not always appear clear in what classes it will give the best results. If it is accepted that school and life should not be separated, but that school is a part of life and that the activities of life should be a part of school work, some indication of the place of current events is suggested. It then follows that the teacher of science will use current material bearing on science, the teacher of history current material relating to history, and thus throughout the list. Sound pedagogy and human interest demand it.

Some teachers, however, do not quite see just how to do this, and prefer to give one lesson a week to current events. Of course such procedure is better than omitting current events completely, but it should be remembered that it is also just a little short of the best method and results. If the teacher of English devotes one period per week to current events, does it seem quite justifiable to discuss in this recitation material relating to science, history, mathematics, etc? It would appear that such material can best be used in the respective classes where such subjects or topics are being discussed. However, for the benefit of those who do not quite understand how to use current material in the daily recitations in the various subjects,

and who still prefer not to neglect such study of current events, some concrete suggestions are made.

Let it be understood at the very beginning that permitting pupils to report on any news item that might be read incidentally will not give even good results. A variety of subjects thus discussed without any arrangement or organization will certainly leave a feeling of vagueness and mingled promiscuity. In addition, if no real and definite preparation be demanded in reciting these news items, the most desultory habits are being encouraged and established. Not even good oral expression is being cultivated.

Perhaps the following are some of the aims to be accomplished in work devoted to current events:

1. To acquaint children with public events.
2. To teach them how to be discriminating in their reading.
3. To obtain knowledge of current affairs.
4. To develop the ability of pupils to judge good reading.
5. To have acquaintance with various papers and magazines so pupils may be able to select intelligently their own list.
6. To develop good expression and enlarge the vocabulary of the pupils.
7. To train in the search for material and in its proper organization.

Note that all these aims can be accomplished through utilization of current material in the various daily classes. But if a special period is devoted to current events, the following suggestions might be helpful:

1. The class may be divided into groups, and each group required to report on the per cent of material found in papers which comes under the head of their special topics. For example, one group may be asked to report what per cent of space is devoted to the discussion of scientific topics. The topics of war, amusement and recreation, invention, etc., may be thus used. Papers selected for this kind of work should be followed for a definite period, say a week or two weeks. Such observations serve to show the relative importance of topics as selected by papers and magazines.

2. The class may be divided into groups and each group assigned a type of periodical to report on what things are discussed in that type. For example, one group of three may be given the weekly periodical, as Outlook, Independent, or Literary Digest. This same group may then subdivide, assigning each person a single one of the papers indicated. The results of these individual observations would then be combined and a report given by the chairman of the group. These observations and reports will serve to center attention on the nature of topics discussed by this type of periodical. Daily evening papers might be given to another group, morning papers to another, scientific magazines to another, etc. Such a procedure can be followed in the use of the Atlantic Monthly, Scribner's Magazine, Ladies' Home Journal, Saturday Evening Post, American Boy, etc.

3. Pupils or groups of pupils may make a selection of important topics discussed in a paper. One paper may be assigned either to the entire class or to a single group. Comparative results are desired, so as to test their ability to judge of important topics.

4. The class may be divided into groups for making reports on

a. State news.
b. National news.
c. World news.

5. Class groups may be asked to report on such topics:

a. Men and women before the public.
b. Mexican situation.
c. Our national defense.
d. Strikes.
e. Science and invention.
f. Literature and art.
g. Our schools and colleges.
h. Nature of contemporary poetry.
i. War poetry (themes used).
j. Railroads.
k. Iron and steel.

Class groups may be divided into sub-committees, each with its own leaders. This will bring out latent natural ability and

develop leadership. It will teach co-operation in work and emphasize the necessity of helping the other fellow. In short, it will tend to socialize the recitation. Always in such undertakings the **teacher** should do the **planning** or **organizing** and the **pupils** should do the **work.** The teacher will thus be tested in executive ability and will consequently plan no more work than can be successfully handled. There are excellent possibilities in this kind of work for the teacher who has vision. If thought advisable this type of work might be used for literary societies in the school.

No opportunity should be lost for emphasizing the necessity for organization of material on the part of the pupils. The teacher of English who thus conducts this work should always insist that the pupils practice the things learned in the regular English class. Good expression, involving clear thinking, the use of good vocabulary, paragraphs, etc., should be one of the results.

The following list of selections of literature will indicate in brief form the work of each year so far as the literature itself is concerned:

English in High School

Shakespeare:

Ninth year:

Merchant of Venice

Tenth year:

Midsummer Night's Dream, or
As You Like It

Eleventh year:

Twelfth Night, or
The Tempest

Twelfth year:

Macbeth, or
Richard the Third

Short Story and Novel:

Ninth year:

Hawthorne's Twice Told Tales, or
Irving's Tales of a Traveler, or

Scott's Ivanhoe, or
Kipling's Stories and Poems

Tenth year:

Poe's Fall of the House of Usher and other stories
Eliot's Silas Marner
Dickens' Tale of Two Cities
Note:— Any two of above.

Eleventh year:

Vicar of Wakefield

Twelfth year:

House of Seven Gables

Epic and Ballad:

Ninth year:

Sohrab and Rustum, or
Homer (Ulysses in Phaeacia)

Twelfth year:

Idylls of King (Selections)

Lyric, Idylls, and Reflective:

Ninth year:

Poe's Poems
Whittier's
Longfellow's
Lowell's
Holmes'
Bryant's
} in one volume

Tenth year:

Coleridge's Rime of the Ancient Mariner
Gray's Elegy, or
Goldsmith's Deserted Village

Eleventh year:

Burns' Poems
Wordsworth's
Shelley's
Keats'
} in one volume

Milton:

Twelfth year:

Lycidas, Comus, L'Allegro, Il Penseroso

Miscellaneous — Prose, Essays, Sketch, Biography:

Eleventh year:

Carlyle's Essay on Burns

Speeches and Orations:

Ninth year:

Lincoln's Gettysburg Speech

Tenth year:

Washington's Farewell Address } in one volume
Webster's Bunker Hill Oration }

Twelfth year:

Webster's Reply to Hayne, or
Burke's Speech on Conciliation with America, or
Lincoln's Address at Cooper Union

The above list forms the basis of the reading in high school. If the list prove too small, selections may be made from this

Supplementary List

Short Story and Novel:

Ninth year:

Stevenson's Treasure Island
Stevenson's Kidnapped
Stevenson's Master of Ballantrae
Addison's The Sir Roger de Coverley Papers

Tenth year:

Cooper's Last of the Mohicans
Hale's Man Without a Country, etc.

Eleventh year:

Gaskell's Cranford
Harte's Tennessee's Partner, etc.

Twelfth year:

Scott's Kennilworth
Cooper's The Spy

Epic and Ballad:

Ninth year:

Macaulay's Lays of Ancient Rome
Scott's Marmion

Tenth year:
Scott's Lady of the Lake

Eleventh year:
Browning's Shorter Poems

Twelfth year:
Old English Ballads
Byron's Prisoner of Chillon, etc.

Miscellaneous — Prose, Essays, Sketch, Biography:

Ninth year:
Plutarch's Life of Alexander the Great

Tenth year:
Thoreau's Camping in the Maine Woods

Eleventh year:
Howell's Doorstep Acquaintances, etc.
Ruskin's Sesame and Lilies
Lowell's Democracy and Other Papers

Twelfth year:
DeQuincey's Joan of Arc, etc.
Macaulay's Essay on Milton

Drama:

Tenth year:
Goldsmith's She Stoops to Conquer

Eleventh year:
Sheridan's The Rivals

Speeches and Orations:

Twelfth year:
Early American Orations

Individual Reading List

Ninth year:

Fiction:

Churchill — The Crisis
Dickens — Oliver Twist; Old Curiosity Shop
Fox — Little Shepherd of Kingdom Come
Hughes — Tom Brown's School Days
Keller — Story of My Life

Tenth year:

Fiction:

Kipling — The Day's Work; Soldiers Three
Norris — The Pit
Page — Red Rock
Wister — The Virginian

Non-Fiction:

Addams — Twenty Years at Hull House
Muir — The Story of My Boyhood and Youth
Riis — The Making of an American

Eleventh year:

Fiction:

James Lane Allen — The Kentucky Cardinal
Churchill — Coniston
Hawthorne — Marble Faun
Kipling — The Light That Failed

Short Stories:

Cable — Old Creole Days
Clemens — The Jumping Frog
Stevenson — R. L. Markheim

Non-Fiction:

Bennett — How to Live on Twenty-four Hours a Day
Mabie — Parables of Life
Riis — Life Stories of the Other Half

Twelfth year:

Fiction:

Margaret Deland — The Iron Woman
George Eliot — Romola; Adam Bede
Thackeray — Vanity Fair; Henry Esmond

Drama:

Maeterlinck — The Blue Bird
Van Dyke — The House of Rimmon
Zangwill — The Melting Pot

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1. The individual list, intended for reading out of class, is suggestive of the **type** of reading to be done. Note that it contains current literature also. The teacher will add to the list.

2. Current novels, poetry, etc., should form a conscious part of the course for each year.

3. Rhetoric and composition must not be neglected, but will be motivated by the needs of the class as they arise from the study of the classics. They will thus be **related** instead of **isolated** studies.

4. Note the study of **types** of literature in each year instead of the study of American or English literature as such. This necessitates using histories of American or English literature as hand-books for purposes of illumination.

References

Bolenius — Teaching Literature in the Grammar Grades and High School — Houghton.

Thomas — The Teaching of English in the Secondary School — Houghton.

LATIN

Aim — To state clearly a few of the things which should be accomplished will materially aid in securing better results. The following things are among those desired:

1. To introduce pupils through the appreciative reading of Latin literature to the life, customs, and institutions of a very interesting people whose influence upon our own life, customs, institutions, and language has been very great.
2. To give pupils a clearer conception of the structure of the English language.
3. To aid pupils in the interpretation of the technical terms which they encounter in science, mathematics, and English.
4. To aid pupils in the development of the habit of expressing their thoughts clearly, concisely, and cogently.
5. To aid in the development of the ability to interpret and enjoy our best English literature.

The history of the life, literature and institutions of the Roman people constitutes a body of knowledge which is interesting and valuable. This knowledge may be acquired first-hand through the appreciative reading of Latin literature.

A knowledge of the structure of the English language is not easily gotten by the average high school freshman because of its complexity and naturalness. The Latin language, however, lends itself readily to scientific analysis because it is highly inflected and foreign to the pupil's immediate experiences. The structure of the English sentence, studied in the light of the knowledge of the structure of the Latin sentence, may thus become clear.

The training in the Latin department should contribute in no small measure to the ability of pupils to gain a clear and definite understanding of the countless technical terms which they meet while studying their lessons in other departments. The Latin teacher can and should render the mathematics, science, and English teachers much aid in this manner.

The chief aims and purposes of Latin are to be found in the increased ability upon the part of the pupils to use and appreciate good forms of expression. Unless the exercises in

Latin translation are conducted with this end in view, they cannot be fully justified. This will require the exercise of care and discrimination in the selection and use of words and a clear understanding of the difference between good English and good Latin idioms.

It is essential for the teacher to keep in mind the facts that the principles of all languages are the same, and that he is teaching the principles of English literature while he is teaching those of Latin literature.

Beginning Latin

Aim — The following things should be kept clearly in mind throughout the year:

1. To master the mechanics of the language, including the ability to read and translate, and the understanding and the use of fundamental grammatical principles.
2. To prepare pupils to read Caesar.
3. To make the first year's work of value for general culture.

Material and Method — In order to illustrate both material and method concretely, and because the material is pretty definitely understood, these topics are discussed together. For the sake of emphasis different headings are given and thus there need be no misunderstandings concerning some of the definite things to be undertaken.

Motivation

The first lessons in beginning Latin should be so conducted as to arouse interest in the subject. This may be done in various ways. The class may be interested in finding out how many words of Latin derivation are found in the Preamble of the Constitution of the United States. When a list of these words has been properly made, it will be quite evident to the pupils how large a proportion of the ordinary words of our language are Latin derivatives. It will, likewise, reveal to them that most of our words of two syllables and almost all the words of three or more syllables are of Latin origin.

The pupils will be impressed with the fact that they are using many of the same terms which were used by the Romans over two thousand years ago. An ordinary notice of an

athletic game will serve as an illustration to prove that we are indebted to Latin for many of our commonest words.

The teacher might ask the pupils to make a list of the technical terms with which they are having trouble in their algebra, general science, or English. An examination of this list will show in a very striking manner how they may use their knowledge of Latin in learning their other lessons.

There are delightful Latin stories that tell many interesting facts about the life, manners, customs, and ideals of the people of ancient Rome. These the pupils will want to read. Pictures and illustrations may serve to make the first year's work of value for general culture. Interesting Latin phrases and mottoes throw much light upon the character of the Roman people and serve as interesting material for translation.

Pronunciation

One of the first things with which the Latin teacher should be concerned is the development in his beginners of correct habits of pronunciation. He must realize that they must depend almost wholly upon **him** for their first correct impressions of pronunciation. Every word, therefore, should be very distinctly pronounced by the teacher until the pupils get a correct mental image of the sound and can pronounce it correctly. If the pupils acquire correct habits of pronunciation economically, this plan must be followed. Thorough knowledge and rigid application of the rules governing pronunciation and accent of Latin words will gradually make the pupils independent of the teachers in matters of pronunciation provided they have not acquired incorrect habits already. A few weeks of carelessness as regards pronunciation of Latin words will fix incorrect habits almost incurably. In prose work pupils should exercise care in marking vowels in the final and penultimate syllables. The Roman method of pronunciation is recommended.

Forms

Pupils in first-year Latin are at first usually confused by Latin forms. In their English grammar they were taught to recognize the case of a noun by the sense in which it was used. In Latin, however, case is determined by the form of the noun as well as by the sense in which it is used. The following sentence will illustrate this point:

"Caesar gave his lieutenant a new sword."

In so far as the form of the three substantives in the above sentence is concerned, there is nothing to indicate the subject of the sentence. In fact any one of them may be made the subject without any change in form whatever. The English language is so nearly a formless language that the pupil must rely upon the sense in which each noun is used to determine its case. In Latin, however, these case relations would be determined not merely by the sense, but by a formal difference in every noun. The teacher is justified in spending much time in leading his pupils to think of the various cases of nouns and the various moods and tenses of verbs in terms of their formal endings. As an aid to their inflection, the genitive singular of nouns and the principal parts of verbs must be learned thoroughly.

Vocabulary

The knowledge of Latin vocabulary as well as of Latin forms is acquired through the exercise of the memory. Much drill, therefore, must be had in order to give the pupils a complete automatic mastery of these fundamentals of Latin. The vocabulary for the first year's work should consist of about seven hundred words which are common in Caesar. Pupils should be encouraged to learn the general, as well as the particular, meaning of Latin words. They should likewise be encouraged to determine the particular meaning of a word by its context rather than by consulting the dictionary. The teacher must cultivate the feeling of self-confidence in his pupils if the best results are to be obtained. Perhaps the best time to learn the meaning of importo, exporto, reporto, and transporto is in connection with the study of porto itself.

Syntax

During the first weeks of the school term the teacher should not be so much concerned with the pronunciation, forms, and vocabulary that there will be little time to devote to the study of Latin syntax. Too many things must not be attempted at the same time or the pupils will become confused and discouraged.

As the child should be well grounded in the fundamentals of arithmetic before being required to utilize them in the solution of problems, so the pupils in Latin should be well grounded in

the fundamentals of Latin before being required to utilize them in the translation or construction of Latin sentences. Only the simplest rules of syntax, therefore, should be given during the first half of the year.

Inasmuch as the knowledge of Latin syntax is acquired through the exercise of the reasoning powers, many of the rules may be developed inductively. In no case should the pupils be required to learn and make application of a rule of syntax until the teacher has satisfied himself that their interpretation of it is correct. This, perhaps, may necessitate the omission of some of the more difficult rules of syntax usually found in first-year texts.

Translation

Latin prose involving only the very simple rules of syntax should be given from the very beginning of the course. The proper word order and the marking of the long vowels in the final and penultimate syllables should be required of all pupils until they become second nature. Brief exercises in Latin prose should be given every day in order to test the ability of the pupils to apply the rules of syntax which they have studied.

The translation of Latin into English is an important exercise if conducted with the view of cultivating good English style as distinguished from good Latin style. The pupils, therefore, should be encouraged to use good English in their translation of Latin.

Drill

Since the work of the first year is so definitely outlined, and since subsequent progress in Latin depends upon the almost automatic mastery of a very definite body of knowledge, the drill exercise becomes a very important factor of instruction. The problem of motivating these drill exercises is vital. Some teachers may solve it in one way, others in other ways. Alertness and enthusiasm are characteristics of every good drill exercise. The wholesome optimistic attitude of the teacher toward these exercises is usually caught by the pupils. It is important, therefore, that the teacher introduce them with enthusiasm and zeal. In Latin, as in all other subjects, pupils delight in the consciousness of the progress which they are making. To this end every teacher of first-year Latin, in the absence of recognized standards

of Latin ability, should devise with care standards of his own. For instance, he might decide that the conjugation of "amo" in the active indicative should be given orally in thirty seconds and that those pupils who have the ability to do this should be excused from further drill upon this particular exercise. In like manner rather arbitrary standards may be devised for written work in which all the pupils may take part at the same time. By the use of these standards, although they may not be accurate, the pupils are apprised of the progress they are making, which is the strongest motive for putting forth renewed effort. The game or contest spirit thus introduced plays a very important part in making drill exercises interesting. These exercises, however, should be brief and given with vigor and enthusiasm. It should not be forgotten that drill work is fundamental in beginning the study of any language.

Caesar

Aim — The aims of Caesar are found in the five general aims of Latin given above.

Material — Pupils who have done the first year's work in a creditable manner should be able to read from four to six books of Caesar's Commentaries of the Gallic War. Campaign maps, if available, should be used in connection with the work in Caesar. A good Latin grammar is indispensable.

Method — The complexity of the characteristic sentences of Caesar is such as to present many difficulties to second-year pupils. They are puzzled with word order and the various devices of subordination. Indirect discourse gives rise to so many difficulties that the teacher is justified in omitting at first those chapters in which it is involved. This may be done without breaking the connection of the story. Not until the pupils have become familiar with the structure of simple narrative, should the subject of indirect discourse be made a topic for special study. Then in the light of the knowledge resulting from such study, the omitted chapters may be read.

During the first few months of the school year the teacher should translate the advance lessons in order to impress upon the pupils the difference between idiomatic English and idiomatic Latin. The pupils, however, should be held responsible for the translation of review lessons.

Incidentally they should learn a great deal about Caesar as a man and about the methods of warfare which he used. They should learn much about the life, manners, and customs of the Romans and of those peoples with which Caesar waged war. The teacher must keep in mind, however, that his chief aim should be the development of the ability upon the part of his pupils to translate with appreciation simple Latin narratives. This will involve a constantly increasing vocabulary and a constantly growing knowledge of the rules of Latin syntax and their application. To this end much importance must be attached to Latin prose. A brief period each day should be given to this type of work which should be based upon the material which the pupils are translating.

To write out in good idiomatic English the translation of a given Latin passage is a splendid exercise if the papers are criticized in the class and carefully scrutinized from the point of view of the English expression. This type of exercise involves the finding of the exact thought as it is expressed in Latin and the expression of it in language that is clear, concise, and cogent.

The Latin that is to be translated should first be read aloud by the pupils in order to make permanent correct habits of pronunciation. The teacher of Caesar as well as the teacher of first-year Latin should guard himself constantly against carelessness in the pronunciation of Latin words.

Cicero

Aim — In the study of Cicero, the pupils should realize that they will read Latin mainly for literature from now on. This suggests the following things to be accomplished:

1. To complete the study of Latin syntax.
2. To develop good English style as distinguished from good Latin style.
3. To make the study of Cicero of value for general culture.
4. To understand in some degree the elements of the oration.

Material — During the third year pupils should be able to complete the four Orations on Cataline, the Manilian Law, and Archias. Some of Cicero's correspondence may be substituted

for the Manilian Law or Archias. Daily exercises in Latin prose based upon Cicero should be given. Pictures and illustrations which throw light upon the life, manners, and religion of the Roman people should be used if they are available. The use of the grammar will be continued.

Method — The prose of Cicero has been called the prose of the human race. It represents the highest type of Latin classical style and thus serves as the basis of a very effective study in the appreciation of good English as distinguished from good Latin style. Every recitation, therefore, in translation should be conducted with this end in view. Brief exercises in Latin prose should be given daily in order to give the pupils an opportunity to generalize their knowledge of syntactical rules, and to familiarize them with the differences between English and Latin idioms.

Through the appreciative reading of Cicero, and discussions in class, the pupils should become intimately acquainted with much of the history of Rome during the last days of the Republic. They should be impressed with Cicero's courageous devotion to the cause of his country. They, likewise, should be impressed with the far-reaching influence of religion upon Roman life.

Some attention should be given to the study of Cicero as an orator and to his orations as illustrating the fundamental elements in good orations. Some material for this study is usually given in the text either as an introduction or as explanatory notes. In addition the text on rhetoric might be consulted.

Inasmuch as pupils are expected to make a thorough study of Latin syntax while they are reading Cicero, special topics for intensive treatment should be selected from time to time. The subjunctive mood and its various uses might well become a topic for such a study. Others will suggest themselves to the teacher.

Virgil

Aim — By the time pupils have reached Virgil they should have reached a point from which they can gain a wider survey of Latin language and Latin literature. To be specific the following things should be kept in mind:

1. To develop the ability to read Virgil with appreciation and enjoyment.
2. To make the study of Virgil of value for general culture.
3. To aid pupils in the interpretation and appreciation of modern classical literature.

It is evident from the things stated above that the aim in reading Virgil is far different from that in mind in the work of the first year. It will be seen that a real advance is presumed. The ability of pupils to generalize should be developed and an examination of the aims given from the first year's work in Latin to the fourth year's work will show that an effort has been made to allow for this development. In the aims of the fourth year's work as stated above a distinct provision has been made for the development of the power of generalization. By the time the pupils have completed their study of the Aeneid they should have a good notion of Latin literature. They should appreciate that there is a great body of Latin literature just as truly as there is a body of English or American literature. They should also appreciate that the appeal made in this Latin literature is as universal and as fundamental as is that of English or American literature.

If such an idea is gained in the study of the Aeneid there will be no doubt whatever concerning the enjoyment and general culture which should result. The teacher should never forget that the task in the work of the year is great and subtle. This alone is sufficient to demand that the things to be accomplished must be steadily and continually in mind.

Material — The fourth year's work is usually based upon the first six books of Virgil's Aeneid. Pictures and illustrations may be used as valuable aids. The works of Shakespeare, Milton, Dryden, and Tennyson may be used to advantage in connection with the study of Virgil.

While it is true that the study of the Aeneid is not to be primarily a **language** study, yet it ought to be clear that the class will still have occasion for the use of the grammar. To be sure, not the same material will be used, necessarily, as has been used in the work of former years, but a good grammar will contain material helpful in the study of the Aeneid.

Books on mythology should be accessible to the pupils for continual reference. It is advisable to use such books as Guer-

ber's Myths of Greece and Rome or Gayley's Classic Myths in English Literature. Not to use such books will insure missing the understanding of the Aeneid in many, many places. Pupils have a right to the fullest pleasure and understanding possible. Teachers should provide for their right.

Under method will be discussed the use of good poetical translations and biographical and expository material.

Method — Pupils usually encounter difficulties when making the transition from one Latin author to another. This is almost invariably the case when they make the transition from Cicero to Virgil. The peculiar case constructions, the large vocabulary, and the highly poetic language of Virgil are the chief causes of difficulty. The teacher should anticipate these difficulties in so far as it is possible. For the first few weeks the teacher should explain all irregular constructions and poetic usages when making the assignment. The teacher at first should read sympathetically and rhythmically all advance lessons. The translation of Virgil should always be made in language that is poetic in order to impress the pupils with the difference between Latin prose and Latin poetry.

It should be understood that translating in poetic language does not mean to translate in poetry. It is hardly to be expected that pupils shall be able to make good poetry out of the translation. This is an accomplishment that belongs to men like Bryant or Longfellow. But it should be remembered that poetic language is often used in prose. Ruskin probably is the best example of this use of poetic language in English literature. It might be an excellent thing for the teacher to read such portions from Ruskin as will illustrate what is meant by poetic language. It is much easier to illustrate than to try to describe or define, and the effect is far more lasting. The following will illustrate, though the teacher can supply other portions. It is taken from Modern Painters, Vol. IV, and is a fine description of an old tower:

"The large neglect, the noble unsightliness of it; the record of its years written so visibly, yet without sign of weakness or decay; its stern wasteness and gloom eaten away by the Channel winds, and overgrown with the bitter sea grasses; its slates and tiles all shaken and rent, and yet not falling; its desert of brickwork, full of bolts, and holes, and ugly fissures,

and yet strong, like a bare brown rock; its carelessness of what any one thinks or feels about it; putting forth no claim, having no beauty, nor desirableness, pride, nor grace; yet neither asking for pity; not, as ruins are, useless and piteous, feebly or fondly garrulous of better days; but useful still, going through its own work,— as some old fisherman, beaten gray by storm, yet drawing his daily nets: so it stands, with no complaint about its past youth, in blanched and meagre massiveness and serviceableness, gathering human souls together underneath it; the sound of its bells for prayer still rolling through its rents; and the gray peak of it seen far across the sea, principal of the three that rise above the waste of surfy sand and hillocked shore, —the lighthouse for life, and the belfry for labour, and this — for patience and praise."

This poetic prose is worthy of the pupils' best emulation, and should they even approximate it in their translations of the Aeneid, the teacher should be well satisfied. Surely Aeneid offers opportunities for such translation.

Scansion is a difficult exercise for all pupils and especially for those who have failed to acquire correct habits in the pronunciation of Latin prose. Considerable attention, however, should be given to the subject of scansion in order that the pupils may gain a pretty clear conception of the poetic scheme with which the Virgilian verse is composed. Texts with the long vowels marked assist materially in scansion as well as translation.

Inasmuch as Virgil's Aeneid represents the highest point of perfection in the literary art of Rome and inasmuch as it represents the highest reach of the Roman imagination, it affords the teacher an excellent opportunity to cultivate in pupils permanent interests in classic literature. The pupils will be interested in making a comparison of some of our English classics with the Aeneid of Virgil in order to find out how greatly our own classic authors have been under the influence of the writings of Virgil. The works of Shakespeare, Milton, Dryden, and Tennyson will serve as excellent material for this purpose. Under the inspiration and guidance of the teacher, pupils, who have made the necessary preparation, should read with pleasure the works of Virgil, so beautiful because of their simplicity, so charming because of their richness of imagery, and so interesting because of their almost universal appeal to human nature.

In the course of the year's work the pupils should become familiar with the Greek and Roman mythology which exerted so much influence upon the life and character of the Roman people. They should gain a clearer conception of the character and attributes of those gods and goddesses that played such an important part in the sack of Troy and the founding of Rome. They should know a great deal about the history of the Augustan age of Roman literature and of those influences which made it possible. And thus the teaching of Virgil should give pupils a better understanding of the principles of literature in general, and contribute to that fund of knowledge which is an important element in their general culture.

Perhaps some assistance can be better given to teachers through more concrete explanations and illustrations. Somehow the notion must be gained that the treatment of the Aeneid should be **literary.** Reflection by the teacher on the method of treatment which should be given an English classic in high school ought to be suggestive somewhat of the procedure in reading the Aeneid. It, too, is a classic, though it be a Latin one. To make it a **language** study therefore is to miss the best possibilities.

The Aeneid is an epic and therefore must be given the treatment that belongs to an epic whether it be English, Latin, or Greek. An epic has a theme; there is purpose in its composition; the author has a motive in its production. Hence we must look for these things in the Aeneid.

Virgil had seen Rome develop constantly toward greatness. As we now know the battle of Actium in 31 B. C. was one of the decisive battles of the world. Before this it was not certain that Rome would continue her development to be the greatest nation of the earth, but after this battle when her only real rival had been beaten so irretrievably there seemed nothing to hinder Rome from attaining that greatness which would insure a grandeur of eternal world significance. The crisis had been met, Rome had survived, the future was secure and roseate. No wonder Virgil was stirred with deep emotions. No wonder that he exulted in the glorious patriotism which seemed to permeate his country.

With the vision of a true seer and with the intellect to compass the occasion and possibilities he desired to do for his country what had been done by Homer for Greece. He would write an epic which would be a monument to the greatness of Rome and in its inscription might be read the story of her national for-

tunes and destiny. But the nation could be nothing without the nation's people; hence there must be included the characteristics, manners, customs, and life of the heroic age. In this epic must be associated the ethical and religious ideals, and the political fortunes of a great people must assume importance. The human interest must be present, but it should not obscure the national interest. The theme is indicated in the close of the exordium, "Tantae molis erat Romanum condere gentem"—"so vast a toil it was to build up the Roman people." There were present therefore the two motives for the Aeneid: (1) The patriotic motive, and (2) the philosophical one. These two, the **nation** and its **people,** gave fame to the poet and permanence to the production.

If the Aeneid contains these things then surely it is but a corollary to say that its study is deficient if the pupils fail in seeing them in the epic.

Under no considerations should the pupils read the Aeneid without finding evidence of Virgil's motives and purpose. If the teacher thinks best, the class might take notes on such portions as are discovered where the greatness of Rome and the Roman people are lauded. It will be surprising to discover the evidence of the pride taken in the superiority of the people and how the fates have certainly decreed that Rome had a divine commission to rule the world. One inevitably thinks of how, some nineteen centuries later, the German people were under the same delusion, and commissioned, also, as they thought, by a divine will and decree. If such a study be made by the pupils and notes taken so that a short story can be written on this phase, there will not only be a definite thing to do, but the doing of it will be accompanied by a keen delight and interest.

Again might be traced the religious element throughout the epic. Virgil surely intended to show that the fates were kind to the Roman people and that their country should be enduring. It will be recalled also that centuries later, before the fall of Rome, and even after, there was the feeling that Rome would be eternal. Even the barbarians on the north of Rome had the same feeling, and were not altogether certain that they should defile the city of Rome itself. Or, if one cared, the part religion played in the life of the Roman in his habits of thinking, etc., might be traced.

Virgil intends to strengthen the courage and bravery of the Roman soldier, and perhaps too of the Roman civilian by assuring

the worthy of a future life. This is indicated in Book VI, lines 660-664, in which he shows a noble company of men who in life were worthy Roman citizens. Translated it is as follows: "Here a company, who received wounds fighting for their country, and they who were pure priests, while life was with them, and they who were holy bards and who spoke in strains worthy of Phoebus, or they who improved life by their discoveries, and who by their good deeds made others keep them in memory."

The above are only illustrations of what can be done in teaching the Aeneid as a real classic. If one cared to give other topics to the pupils they might be found in such as these:

1. The Roman idea of a future life.
2. Character of Dido.
3. The place of the supernatural in the Aeneid.
4. The dramatic element in the Aeneid.
5. Juno's part in the epic.
6. Tracing the separate stories in the Aeneid.

These topics ought not to be undertaken as a burden by the pupils. To work in that spirit means a joyless task. The enthusiasm of the teacher, the clearness of his vision, his profound and acknowledged scholarship, his feeling for the literary side of the Aeneid, will all inspire his pupils, encourage them in their endeavors to see and understand this Roman epic as a piece of literature. If there be lacking in this study joy and interest and pleasure the teacher should make a scrutinizing analysis of himself and his methods. As an aid to the teacher in giving right treatment to this epic, he ought to consult such a book as Sellar's volume on Virgil in his The Roman Poets of the Augustan Age.

The teacher should make use of some poetical translation of the Aeneid. The teacher should either purchase one or place it in the library. The best translation done in poetry is that of Conington. It will materially add to the pleasure and profit of the work if the lesson is read from such a translation even before it has been assigned to the class. This reading will thus give them a unified idea of what it is all about. Indeed even a much greater portion than the lesson might be so read so that some idea of the unity of the epic itself might be gained. It is surprising what better results will follow such a procedure. An il-

lustration from Conington follows, showing that good can be received in securing an idea of the poem and that the teacher need not fear making such a translation accessible to the pupils. It is quite clear that any translations made by the pupils must be made in prose so that no danger will follow the free use of a poetical translation.

A good notion can be secured by comparing Dido's despairing complaint as given in Book IV, beginning with line 527, with Conington's translation of it:

'Tis night: earth's tired ones taste the balm
The precious balm of sleep,
And in the forest there is calm,
And on the savage deep:
The stars are in their middle flight:
The fields are hushed; each bird or beast
That dwells beside the silver lake
Or haunts the tangle of the brake
In placid slumber lies released
From trouble by the touch of night:
All but the hapless queen: to rest
She yields not, nor with eye or breast
The gentle night receives:

* * * * *

"What shall I do? make proof once more
Of those who sought my love before,
In suppliance to the Nomads turned,
Whose proffered hand so oft I spurned?

* * * * *

No; die as you deserve, and heal
This anguish with the sharp sure steel.
'Twas you, my sister, first, who, swayed
By my weak tears, my peace betrayed
And gave me to the foe."

* * * * *

Aeneas, ready to depart,
Slept, in his vessel laid,
When Mercury in his dreams was seen
Returning with the self-same mien
And this monition made.

* * * * *

"With vessels all the sea will swarm,
And all the coast with flame be warm,
And fiercely glare the blazing brand,
If, lingering on this Punic land,
You meet the morning light.
Away to sea! a woman's will
Is changeful and uncertain still,"
He said, and mixed with night.

The literary atmosphere will surely be created and must be if the Aeneid is to mean the most. All the above illustrations merely suggest how that can be done.

MODERN LANGUAGES

Aim — In the study of a modern language it should always be kept in mind that it is the duty of a language **now** in use as a means of communication by people living today. Keeping this in mind will in some measure indicate the aim of such a study.

In the first place the fact that a modern language is in use today will suggest that such a language is a developing and not a completely developed thing. A language in the making is quite a different thing than a language already made.

In the second place we may reasonably expect to discover the principles and processes of a growing language. We may be able to see how new words are really formed and how new meanings for words or phrases arise.

Again we may certainly expect a modern language to be used as a means of communication by the people of a nation not only with each other but with the people of other nations as well.

These and other considerations will indicate that depending upon the length of time devoted to it, we may expect the accomplishment of the following things in the study of any modern language:

1. To be able to speak the modern language with some fluency.
2. To be able to read with ease the modern language.
3. To be able to read to some extent the literature in that modern language.
4. To understand somewhat the ideals of a people through their language and literature.
5. To develop a better international understanding.
6. To establish more friendly commercial and industrial relations with foreign nations.
7. To gain some idea of the place which philology and philosophy have in any language.
8. To add to our understanding and appreciation of the English language.

Let it be understood that it is not presumed that the above things will be accomplished either in number or degree in a course of two years as in a course of three or four years. There are a number of factors involved in the accomplishment of the various things in the other subjects in the curriculum, and it is quite natural as well as logical to expect some contributing factors in the study of modern languages. But even so, it is worth while to check the work done with the things desired. It will in some degree suggest whether the work is proceeding in the right direction.

The importance of understanding the foreign nations, and of developing more friendly relations, diplomatically and commercially, is not to be minimized. The relations of the United States with foreign nations have developed and are still developing in extent and complexity. Daily we are increasing the number of our neighbors. Increased knowledge about them will tend to give us more intelligent relations with them.

The understanding of the ideals of a people as indicated in number four above in no wise suggests that we must copy or worship these ideals. Neither does it even hint that we must in any way be in sympathy with them. Does any one contend that a study of the history of Egypt or Persia means an acceptance of their ideals? The rather shall we say that often such a study means a rejection of those same ideals. The courts of justice inquire carefully into the motives and acts of persons brought before them in order to arrive at intelligent decisions and be prepared to give sound judgments concerning them. Rational knowledge gives intelligent direction in acceptance or rejection in the formation of proper judgments; in our dealings with others. Only in such a spirit must be undertaken an analysis of the ideals, customs and characteristics of the people through whose language they are presented. To be studied in any other spirit is unpedagogical and dangerous.

Frequently the teaching of modern languages falls far short of accomplishing the things set forth above. A clear idea of the aim and a keen discrimination in the possibilities of the subject should very definitely determine good results. Pupils should be made conscious of these things, but this can not be done unless the teacher has them well in mind.

It might be helpful to indicate even in more detail some specific things desired in the work of each year.

First Year

Reflection on the process of learning the English language will serve to enlighten one in the work of the first year. Briefly the following should be accomplished:

1. To master the mechanics of the language such as
   - A. Phonetics.
   - B. Pronunciation.
   - C. Enunciation.
   - D. Spelling.
2. To learn some simple principles of grammar.
3. To read some easy stories followed by some easy classics.
4. To be able to converse to some extent in the language.

Unless the teacher knows exactly what, on the whole, should be accomplished the first year, and just exactly in what regular order things should be accomplished, even to as definite degree as knowing the various individual steps for each recitation, confusion and failure will very probably result. The teacher of modern languages should not only know, but be held responsible for, the steps in the beginning class, and even to as great a degree as the teacher of primary reading. That this is not always true of teachers of modern languages is rather self-evident. And it should be added that the high school teacher of modern languages should not scorn to learn method of the good teacher in the primary grade.

It should be remembered that the beginner in any language must know how to use that language as a **tool.** It is only by the skillful use of it as a tool will he be able to derive anything from the language and literature. The child in the primary grade of school can read for thought only when he has learned how to use the tool which will enable him to get thought. To no less degree is it important to the high school pupils in modern languages. Keeping this in mind of both teacher and pupil will often lend motive where none might otherwise be, and give interest where the work might otherwise be prosaic and dull.

In the direct method of instruction suppose, for example, the teacher tells, as he will, the story to the class, using the foreign language, and by his acts endeavors to assist in the meaning and understanding. Now the teacher ought to know definitely just what points to observe, and just what thing or things he expects

the class to get. It is not sufficient for him to know that the direct method presumes the telling of the story and conversation about it, but he should also know **why** this should be a step and just **what** is expected in it. This knowledge will enable him to know when he is successful in the step and will suggest to him ways and means of modifying the steps if his pupils are having difficulty. Only when any modification is thus undertaken will there be any certainty that no principles are violated and the ends accomplished.

Likewise in the study of the simple principles of grammar, the teacher should know **why** these things are studied. It surely is not sufficient to know that **some** grammar is supposed to be studied and **therefore** the assignment in grammar is made, or attention called to certain grammatical forms. The teacher should be able to give a reason **why** the particular portion of grammar is being studied and at that particular time. And the reason must be a **specific** and not a general one. Otherwise it is a mass of stuff, perfunctorily taught by the teacher and studied by the pupils, without motive or interest, and unrelated without any apparent function.

If the steps in teaching the beginning class are not clear in the mind of the teacher, and the reasons not understood, the teacher is open to severe criticism and if he is conscientious the defects will be remedied at once. The supervisor therefore will be doing his full duty by the teacher and, in a very important sense by the pupils, when he insists on the **intelligent** use of the method of instruction. Let it be clearly understood that there can be no shirking this responsibility.

Work of the Following Years

If the work of the beginning year has been honestly done and well covered, some **advance** in the remaining years can properly be expected. And it should be positively stated here that the teacher should **know** what advance and progress are desirable in each of the remaining years. Just to read and study the modern languages each successive year in a general sort of way is not sufficient. It is well to do the following things:

1. To acquire a useful, comprehensive knowledge of the grammar of the language.
2. To increase the ability to converse freely in the language.
3. To read many classics in the literature of the language.

Now it is quite evident that the pupils will be doing some progressive work if the above things are kept in mind. Perhaps not much explanation of them is necessary. Without doubt the first two will be well done by a teacher who knows how to teach the work of the first year.

But to derive the desired results from reading the classics is not always easy. The work of the first year emphasizes the mechanical side, but to read the classics in any literature is above all **not** mechanical. The teacher who would be successful in the teaching of the classics in the modern languages should turn to English in this manual and read what is there said and illustrated under Literature. It is quite conceivable that the modern language teacher might emphasize certain phases of work not so emphasized by the teacher of English, but unless the classics in modern languages are considered as **real literature** and so taught, the best and the most desired things are entirely lost.

Reference to the things indicated under Aim in modern languages will be valuable to the teacher about to begin a classic. Surely if the ideals of a people are to be understood, the writings of the recognized best literary men must not be neglected. Life and life's ideals most certainly are as truly reflected in the literature of a foreign language as they are in the English language. He who would understand to the fullest American life and American ideals must read the best American literature. To no less extent must also then be read the best literature in the modern languages to gain any adequate conception of the ideals of the people using those languages.

Perhaps no better thing could be done for the pupils than to teach them how to interpret the great body of literature which exists in the various languages of the day. To understand such a significance the teacher should read what is said about interpretation under aim in reading in the Manual and Course of Study for the elementary schools, page 26, and also on pages 27 and 28. In fact the more the modern language teacher reflects on what work should be done, the more potent becomes the conviction that there are some things common to the teacher of reading in the grades, to the teacher of English in the high schools and to the teacher of the modern languages. All must emphasize the ability to interpret, though very truly the emphasis may be different for the different years devoted to the work.

Psychology teaches that the child in his learning the language of the society of which he is a part, is really in essence acquiring the use of a tool for social purposes. He learns to read that he might assimilate, and thus be better prepared socially to meet the demands made upon human beings. The social heritage of the race thus becomes his own. So in learning to read in the modern languages he is coming into possession of a larger inheritance than is possible through a knowledge of English alone. His teacher should be conscious of this fact and be sure to give him an opportunity to possess this inheritance. So from this angle we again return to the importance of reading the classics with something more of a purpose than merely to know grammar or language structure.

Such an aim in the work following the first year will surely not be completely accomplished in the work of the second year. It will have only begun, relatively speaking, but even **that** is some gain. Real enjoyment with real enthusiasm can be derived from such an aim. It is ambitious, it is true, but not beyond accomplishment.

Material — The material for the study of any foreign language is rather definitely determined and quite commonly understood, so that it is not necessary at this point to comment upon it at large. Under method some indication of it will be given. It might be well to recall again the various things to be accomplished in the study of a modern foreign language, for it is certainly accepted that what one **intends** to accomplish will to some degree at least determine the **material** with which he must necessarily work.

To be able to read a modern language with ease implies **some** knowledge of the grammar and structure of that language. How much of this will be given will be determined by how much is necessary in order to read and speak. But it should be remembered that children both talk and read before they understand the grammar and structure of the English language. This is valuable and interesting to keep in mind in the work in modern languages in high school. Some knowledge of grammar suggests that some definite attention be given to it. Hence perhaps during the latter portion of the first year, the use of a text on composition and grammar might be desirable.

Again the things to be accomplished will suggest a study of the real literary classics in the modern languages. There will be

stories used in the class also. Books of travel and of description will be helpful when these classics are being studied. Some material on the philosophy of the authors read will be illuminating. Of course it is evident that there is not so great a need for a great amount of material as there is for material of the right sort. High school pupils in the classes in modern languages will necessarily be limited in the use of material.

The possibilities of the material and the abundance of it should be known to the pupils. Hence while there are limitations in the use of an abundance of material in the beginning of any language, the teacher will always use all that the classes can possibly handle. Sometimes English translations of merit and by literary men may illuminate and assist in the work.

Method — Again must the things to be accomplished have a bearing on how best to accomplish them. For example, if it is desirable to have boys and girls read the classics in a modern language, that suggests the desirability also of having them read with the greatest possible understanding and with the least possible waste of time and energy, and the least possible difficulty with the mechanical side of reading. Now in order to have the best possible understanding and the least possible waste it is quite evident that the pupils should learn **to think** in terms of that modern language. If a boy, in reading French, must translate it into English, and then mentally interpret the English, there must of necessity be some waste of time and energy. If in addition the boy be asked to express orally or in writing what he has read, he will be under the necessity of somewhat recasting his own interpretation into proper words for its statement either in French or English. Some method should be used whereby the boy will not be required to go through these several processes. He should be taught to **think** in **French** so that there will be no necessity for a mental translation. Words in English carry certain meanings and connotations and we understand them without attempting to define them or think of their equivalents. With equal facility and exactness should words in a modern foreign language carry their own meanings and connotations. It is quite possible so to teach the modern foreign language. To get the best out of the study of a modern language such instruction is imperative.

The above considerations suggest inquiry into any method which will give these desired results. It is quite probable that

the Gouin method, which is also popularly known as the direct method of instruction, will give these results. It is not the intention to describe this method in detail, partly because it is already well known by most modern language teachers and partly because if not well known the limitations of this manual make it impossible to describe it in full, and any other description would not be valuable and might be positively harmful.

The Gouin or direct method presumes ability on the part of the teacher to converse freely in the modern language taught. It is also the presumption that conversation in the language will be carried on in the class room. Insistence by the teacher on the **use** of the language in class conversation and exercises will do much in rapid development of the ability to think in the particular modern language. And, too, it is quite important that the use of the language become a habit from the very first lesson.

Teachers should insist upon prompt answers to their questions during a conversational exercise in the language equally as much as upon the replies being in the language. Failure and neglect to do so will invite the pupils to form the habit of translating, mentally, before the answers are given. Such a habit, and such a method tending to the formation of the habit, have been condemned above. Boys and girls will not always agree that prompt answers in the language are the best for them, but are quite prone at first to complain that the teacher will not give them time to think, when they really mean time to think **in English**, but when they do begin to grow they will have only compliments for the teacher who thus compelled their growth. Gentle firmness and sweetness on the part of the teacher for the first few months will afterwards be rewarded in great and full measure.

The beginning study of any language is necessarily slow but none the less sure. Time is necessary for the children in the primary grade to learn to read and it is of urgent value in the beginning of a language in the high school. The fact is that the teacher who most frequently reminds himself of the method by which children learn to talk and read, and endeavors by careful analysis to see the factors involved will have a distinct advantage in teaching a modern language.

It is of course admitted that the high school pupil with his more mature mind and his accumulated experience does not learn in the same way as the primary child, but there is a very striking similarity and a close parallel, valuable for the high school teacher

to observe. Once more is there emphasis on the fact that every teacher should be a student of psychology. The language teacher should be a student of genetic psychology, particularly.

It is important to note that the Gouin method needs some modification. Gouin insisted upon teaching the entire vocabulary of the foreign language by means of the series before the student was permitted to take up the literary study. Most authorities today declare that this is not only unnecessary, but it is a mistake to do so. The needed modification of his plan therefore is to teach **a** vocabulary by the series but not **all** before beginning the study of some easy text.

Above it has been stated that it is desirable to teach **some** grammar even though Gouin advocated differently. Note, however, that the grammar must be taught **inductively** until some of the more common and principal forms have been learned, and the amount is determined by the need for it **as felt and seen by the pupils.** When a text is used later it is quite as important to keep the inductive method in mind and before the class, though there will later be more need for a great deal of drill to establish the forms. For the most part the work at first in all the study is the mastery of the language **as a tool,** so that the pupils may later be able to read for thought, just as in the primary grade in reading.

How much more modification of the Gouin method will be necessary must of course be determined by the needs of the class and only after the most careful consideration by the teacher. It is quite easy to modify any good method so much that nothing at all is left of the method itself, and no other new method is developed. This leaves the whole matter in a very vague, confused and unsatisfactory stage. Whatever modifications of any method are made should be in harmony with the fundamental principles of that method **if** those principles are sound and are worthy of a place in good teaching.

It is quite evident that the modification of the Gouin method to the extent of having the **translation** idea predominate would be entirely out of harmony. In fact and reality, it would simply be the substitution of another method for that of Gouin. It would mean the complete abandonment of the Gouin method. It would be unnecessary to add that the **translation** method in modern languages is to be condemned in the severest terms and is not to be permitted in high school work. Very great care should

be exercised in modifying any method. In short, devices and methods of execution and application of principles may with safety be left to the user of any method provided the principles are thoroughly understood. This is true of the Gouin method in modern foreign languages.

Somewhere in the work the teacher will provide for not only the reading of little plays, but the dramatization of them also. Aside from the mere enjoyment that is thus derived there is a real psychology in such a procedure. It is recognized that there is an auditory and motor basis of speech. These two things function largely in dramatization.

Without speaking in didactic terms, the ability to think and converse in the language can be developed to a large degree. A motivation of much necessary work may thus be made. On this score alone one could justify dramatization. It is unnecessary further to enumerate the various things to be gained in such an activity.

It is not presumed that these little plays need or ought to be very pretentious. Indeed some simple plays, simple in their plots and settings, are often more enjoyable than the complex ones. This is true not only from the standpoint of the teacher and pupil but from that of the audience as well. This leads to the thought that while these plays are not to be pretentious, they will not always be given for the class alone nor even for the high school alone. It should be remembered that an **audience** is a very encouraging feature for successful rendition. From this point of view of taking the public into full confidence it is quite proper occasionally to give such plays in the evening, when friends and patrons may share the enjoyment with the school. The teacher who does not so plan is losing a great opportunity to be successful in many ways.

Let it not be forgotten that in instruction in a language there must be much drill. This is absolutely essential. The teacher's method therefore will provide for it. The good teacher who is consistently pedagogical will of course try to motivate all that is possible, but there may come times when such a teacher does not see how to motivate all drill. Having settled that drill is necessary, even though motives be not always found, there will be provided drill work. In the fixing of impressions and in establishing right habits, drill is essential. The element of imitation is present in the learning of any language. Certain definite

habits must be established. Correct forms must become very familiar. Drill will aid in doing these things. Provide for it.

Too often in the teaching of the modern languages there is no clear concept of method at all, and in other cases, even where there is a notion of method, the various steps of that method are not clear to the teacher. To state that a teacher is teaching the modern language is not very enlightening as to what is being done. What constitutes the necessary procedure in such teaching must be very definite. It is not sufficient that there is teaching in general; there must also be teaching in particular. Not just to teach the language, but to teach particular and specific things in the language; not just to teach the classics, but very specific things in the classics; doing these specific things in a specific way will result in contributions to the study of modern languages. Improvement in method as well as knowledge of method is desired. Let there be enthusiastic efforts made for this improvement.

Reference

Handschin — The Teaching of Modern Languages in the United States — Bulletin, 1913, No. 3, published by the United States Bureau of Education. (Probably can be secured free for the asking.)

HISTORY

Aim — Doubt and a vague uncertainty often attend the study of that kind of phenomena which is as diverse and heterogeneous as historical phenomena. But such a study instead of discouraging the student should challenge his best energies and ambitions. It is a worthy accomplishment to discover purpose, order, continuity of development, and consequential results in this complicated phenomena. The discovery of these things should result in definite effects on those who make them. Some statement of desired results will lead to more satisfaction to both teacher and pupils. Teachers should analyze these aims until their own ideas are clarified.

The teacher of history in high school should refer to the statement of aims in history given in the Manual and Course of Study for our elementary schools. By comparison it will be found that the aims there stated must also be kept in mind by the teacher in high school work. The following aims will serve to direct the work in high school:

1. To develop a sincere and intelligent type of patriotism.
2. To secure a true perspective of the past and to understand its relation to the present.
3. To develop the habit of weighing historical evidence.
4. To train pupils in the scientific study of history.
5. To understand the past and present of existing institutions.
6. To create a desire for higher moral standards.
7. To develop a broader sympathy with other nations.

In addition to these the teacher may have others different in intent or wording. Whatever they may be or however they may be stated, conscious daily efforts for their attainment should be put forth. Merely to teach the subject matter in the text may or may not result in good. Any good text has one or more definite aims, and if these be not studied and understood by the teacher and he himself has none in his mind, there is no certainty of obtaining good results. The author's preface should be closely read and the ideas and aims considered. They may then be rejected or accepted, but in any case

a more intelligent use of the text will result. The fact that the element of judgment enters into their acceptance or rejection will necessitate a mental reaction which in itself is quite healthy.

It is very much worth while for aims to exist not only in the mind of the teacher but also of the pupils. The attempt to state clearly to a class just what is intended, or to draw from the class itself, will be profitable to both parties. The teacher's own ideas will thus be clarified and the pupils be given intelligent direction and guidance. It is quite characteristic of teachers to begin the study of history for the year without even considering the right of pupils to know what really is expected of them. This procedure is not only a violation of good pedagogy but an offense against defenseless pupils. Let this practice be discontinued at once. Not the first few pages of a new text, but an informal discussion of things to be accomplished should form the basis of the first lesson of the year. Not only the pupils, but also the teacher will thus discover the necessity of mental adjustments and readjustments. An appeal will also be thus made to the pride and intelligence of the pupils which will be a future factor in co-operative work.

Material — The aims of instruction in history having been determined, it is equally important that there be a proper selection of material. The material with which the blacksmith works will certainly be largely determined by what he wants to do with it. Argument therefore for proper selection of material for history seems unnecessary. Yet how often with audacious disregard for the aim is material used in class work. When the things done in the school are really considered a part of the day's work, perhaps the care exercised in other life activities might even suggest a like care inside the class room.

To indicate **all** the material for history work would be a large undertaking. But certain obvious material can be suggested:

1. The adopted text.
2. Collateral reading in other texts and reference works.
3. Pictures and illustrative material collected and used in notebooks.
4. Historical, physical, and political maps.

5. Source material consisting of that secured from source books, documents, and files of newspapers and magazines.
6. Literature, consisting of poetry, novels, essays, etc.
7. Biographies of historical characters.
8. Current material, consisting of speeches, editorials, news items, articles in magazines and newspapers, pictures, etc.
9. Information secured from the moving picture shows, local resident or non-resident lecturers and travelers, attorneys, and ministers.
10. Collections of curios of historical nature.

Discussion with the class of just what constitutes historical material will prove enlightening and illuminating. Vagueness on the part of both teacher and pupil will thus be dispelled. There will then come a realization that historical material is not all found in books and documents and magazines. Indeed, it will be discovered that there is much historical material which is not even written or printed at all. Much of it, and often of great value, is found in monuments, buildings, works of art, human institutions such as slavery, the family, lodges, political parties, etc. Indeed, who shall say that biology in its endeavor to explain the evolution of species is not frequently a source of historical material?

Such a discussion is certain to result in a better vision and appreciation of the meaning and possibilities of historical material. The suggestion will naturally come to the pupils to look for material not only in books and documents of the past and present, but in the very structure of society, present as well as past, in its varied aspects of religion, education, industry, and political, economic, and social activities. Wouldn't it be worth while for boys and girls to understand that history is **now** being made and that they themselves may be determining factors in the making?

Method — Having closely followed the discussion on aim and material, it is quite evident that a method of procedure must be agreed upon. To accept the aims indicated, to agree in the use of material, and then deliberately to fling to the winds both in use of an unsound method is to add insult to injury. If not consistency, then the rights of the pupils should demand the use of a sane and effective method.

Reflection will suggest that instruction in history should become operative in the lives of those instructed. To hope that the mere possession of **facts** of history will somehow, sometime, permeate and vitalize life's activities is an uncertain, if not altogether vain one.

The pupil may learn that Prussia became the possessor of Schleswig-Holstein in 1864. He may know that Prussia and Austria engaged in war in 1866. But these facts may fail to arouse any enthusiasm or interest. Indeed they **may** have the opposite effect of depressing him. If on the other hand the pupil could see that the acquisition of Schleswig-Holstein and the resulting expulsion of Austria from the German Confederation were only steps in the great Pan-German policy which resulted in the world conflict beginning in 1914, and in which the security and safety of the United States as well as democracy everywhere were endangered, scarcely can there fail to be aroused interesting, vigorous, and enthusiastic responses.

The fact that in the early days of the history of Jamestown there was a common storehouse from which the colonists drew their supplies of food may have only a curious and passing interest for the pupils of today. But if there is established a vital principle of the powers of a government to look after the welfare of its citizens, and if a proportionate relation between that fact and the control of railroads by the United States in 1918 can be seen, it has risen into real significance which must not be ignored by the American citizen of the present generation.

Without further illustrations it can easily be seen that it is dangerous to **assume** that historical instruction will function, but that on the other hand it is quite essential that such method be followed which will **insure** its doing so.

Perhaps it will be agreed that there should be some difference between the instruction in history in the grades and that in high school. There should certainly not be a repetition in high school of the work done in the grades. There must logically be an **advance** made. This difference and advance must consist not only in the **selection** of material but in its **presentation.** In the high school history should be less narrative and more scientific than in the grades.

In order that there be no misunderstanding as to what is meant by scientific study, it will be well to examine the procedure in the study of science. The following will illustrate the steps:

1. The existence of a fact or phenomena excites our curiosity and interest sufficiently to cause us to desire an explanation. By observation we become thoroughly familiar with the fact or phenomena.

2. This familiarity will lead us to advance one or more hypotheses for its explanation. They will be based on knowledge and might be termed scientific "guesses."

3. By experiment we discover certain things, collect data, eliminate certain possibilities or conditions, and try to reproduce the exact phenomena observed.

4. All these data, etc., are then carefully examined, analyzed, arranged, and tabulated.

5. Certain conclusions are then reached and stated.

6. Finally we describe what is concluded to be the real explanation and formulate it into an hypothesis.

Now a method of attacking any subject which involves a similar procedure can rightfully be designated as scientific. It will be noted that using the scientific method does not indicate that the subject which is being studied is necessarily a science. There is no consequential relation between scientific method and science.

It is the acquaintance with and skill in the use of scientific method in the study of history in the high school which is meant in the distinction made concerning narrative history. Nor should it be understood that there shall be **no** attempt at such scientific study in the grades, but that this attempt shall become far more pronounced, intense, and elaborate in the high school.

Quite clearly there is a difference between the study of a natural science and of history which deals with social phenomena. There will be no **fact** but only a **description** of it; experimentation is possible in a natural science but not in history. But in spite of these differences the **method of study** is quite similar. We can use the **description** of the fact for the fact, and can collect data and make observations without experiment and still examine, conclude, and hypothecate.

In collecting data, which of course is historical evidence, much critical care must be exercised. Here is where pupils can receive excellent training. In examining the evidence many questions will arise. Was the author in a position to secure the facts of the

case? Is he likely to be prejudiced in his description? Is there any reason why he might omit stating all the facts? By comparison with other authors, is it possible to discover added information? Is it possible to verify the author's statements? Could he be mistaken in what he believed to be true? In making statements has he drawn inferences and made judgments? If so, are they warranted? Has he used data which are not proper to admit in the case? These and many others will arise and indeed the pupils should be trained to raise them. If they are so trained America will have fewer people with bias and prejudice, and a sounder citizenship.

To permit pupils to spend all their time in school in historical criticism would not be wise. These things should be done, but so should many others. In the solution of problems in history, examination of the nature of the evidence is only one step. There should be no mistaking this fact.

From what has just been said, it is evident that a type of material will be used in the high school differing somewhat from that of the grades. To be sure from the time history is first introduced into the grades until the completion of graduation from high school, there is a gradual transition and approach to this type of material, but it is quite emphatic in high school. This is well illustrated in the study of biography. In the earlier grades this study concerns itself with the man as an **individual.** His characteristics, virtues, and services emphasize him as an **individual unit.** The facts about him are **particular** and deal with the **concrete** as much as possible. In the very early study of historical characters, such have been selected as can be easily understood in their simple surroundings. But the later study deals with men who lived in very complicated social groups, in which tendencies and movements are difficult to trace. Their contributions to the **social groups as units** are now of much more significance. Human motives, mental attitudes, and emotions now concern the pupils more than formerly. In short the study has gone from the concrete to the abstract, from the simple to the complex, from the particular to the general. Thus has the study of biography made the transition from **individual** development to **social,** and the pupils have widened their vision to include co-operative activities, co-operative thinking, resulting in the development of **social welfare.**

Collateral reading will furnish an opportunity for the use of notebooks, but it is not the only opportunity. For the teacher

to insist on lengthy abstracts of all outside reading to be inserted in notebooks is to insure aversion and disgust on the part of the pupils. Much of the collateral reading should never be abstracted at all, and few, if any, notes taken on it. Even the professional man, who has much use for reference material, does not abstract all the material read. Why isn't it worth while to do some things in school which life activities will demand and leave undone many things for which no one, except school teachers, has any use? Often time spent in abstracting or taking extended notes can better be used in more extended reading. Even if notes and abstracts are sometimes valuable, they usually are intended for **temporary** use. Is the **use** of things to be a guide to everybody except pupils and teachers?

There are abundant occasions for collecting clippings, extended articles, pictures, etc., which can best be preserved in notebooks. Sketches of maps for illustrative purposes may sometimes be drawn in notebooks. In short the notebook should contain only such material which can be used in the work of history and not merely a collection of material, promiscuous and valueless. It should be a tool for work and not merely for display.

Current history is suggested above. The teacher of history who fails to use this material in class is missing one of the most pleasurable and profitable opportunities that ever come. What a wealth of suggestion lies in the following topics selected at random from current popular magazines: "Can We Build Those Ships in Time?" "Harvest Time for the Get-Rich-Quick Promoter," "German Efforts in Mexico," "With the Belgian King and Queen at La Panne," "Invaded America," "Brand Whitlock's Own Story." Of peculiar value are those magazines which have excellent pictures.

All such material can best be used in connection with the regular daily work of the history class. Reference to the aim will show that the use of current history is one of the most effective means of explaining the relation of the present to the past. But for those who do not quite see how to use all such material in daily work, it will be enlightening to refer to the topic Current Events under English in this manual, where some specific directions are given.

A word of warning should be given concerning any method which will encourage or even permit pupils to memorize the text and thus often use **words,** futile and meaningless, instead of **ideas.**

Through the instinctive desire for self-preservation, pupils will give words, mere words, in the recitation with the assurance that the careless teacher will never discover the difference between the real and the unreal, the true and the false. Also should there be equal care in guarding against glittering generalities instead of the concretely particular. This can be illustrated by paragraphs taken even from many good texts on history. Having discussed some of the evils resulting from enfranchising the negroes in the South during the period of reconstruction, one author has the following to say:

"The Ku-Klux Klan (1868-1871) — Naturally, men of property and intelligence resented these unjust practices and determined to put a stop to them. At first the whites used peaceable means, and soon got control in some of the States. But in others, especially where the blacks were in a majority, the whites were not so successful. In those States attempts were made to terrify the freedmen. Much of this terrorizing was done under the name of a secret society called the Ku-Klux Klan, which existed throughout the South," etc., etc.

The really diplomatic pupil could recite this entire paragraph in such a manner as successfully to deceive the unsuspecting teacher, and yet know absolutely nothing whatever about the Ku-Klux Klan. Day after day such "reciting" is going on under the guise of studying history. Not the pupil, but the teacher who permits it, is to be censured. The whole thing could be corrected very easily by an insistence upon the use of particular facts and statements instead of generalized ones.

To determine just how effective is the work in history frequent reviews or tests or examinations might be given. But let it be said that if these things are to be the ordinary stereotyped affairs, it is better never to have any at all. The testing of memory in history certainly misses the aims laid down in the beginning above. But if these tests are intended to reveal the growth and increase of power to reason, to weigh evidence, to form historical judgments, to establish relations, then they can well have a place in school work. This revelation can come quite as often and as clearly in examinations conducted with the book open as with no text at hand at all. Suppose the following paragraph were to be under consideration:

"The consolidation of capital in great corporations was attended in the same epoch by combinations of laborers for the securing of adequate wages, a fair working day, humane treatment in case of sickness or disability, and protection against unmerited discharge. The Knights of Labor, organized by the garment cutters of Philadelphia in 1869, had grown by 1886 to a national organization with over 700,000 members. The object of the organization was to unite the workers of America into a great brotherhood whose motto was, 'The injury of one is the concern of all.' It declared in its preamble that 'the alarming development and aggression of great capitalists and corporations, unless checked, will inevitably lead to the pauperization and hopeless degradation of the toiling masses.' It demanded for the workers 'full enjoyment of the wealth they create and sufficient leisure to develop their intellectual, moral, and social faculties, to share in the gains and honors of advancing civilization.' For the accomplishment of these ends the order made demands on state and national governments for laws guaranteeing the health and safety of workers in mines and factories, prohibiting the employment of children, enforcing arbitration of disputes between capital and labor, laying a graduated tax on incomes, forbidding the importation of foreign labor or the employment of convict labor, and securing the 'nationalizing' (i. e., the purchase by the government) of the telegraphs, the telephones, and the railroads."

One question, sufficiently comprehensive, might be enough for a test. It might well be: Of what value is the information contained in this paragraph to the citizen of today? With the open text, and any other material they desire to have at hand, let the pupils examine, analyze, weigh and consider, reflect and discuss. Their written replies will reveal the presence of power and ability, or the absence of them. To be sure, if the teacher has been in the habit of accepting superficial answers in the daily class work, superficial discussions will result here also. But only the weak teacher will permit the formation of such pernicious habits, and perhaps but little more damage will result in such an examination given by this type of teacher than will come from any other kind of examination.

Other types of questions might be used for such tests, reviews, or examinations. The following are illustrative:

1. What allusions to history are made by Lincoln in his Gettysburg address?

2. Select facts showing that the English theory and method of colonization are successful.

3. Cite pages and paragraphs showing the significance and importance of the industrial revolution in England.

4. With the aid of a source book, contrast the real Ems telegram with the one which Bismarck gave to the press.

5. What opinion does the author of your text have concerning Demosthenes? Cite selected facts supporting your answer.

The nature of these tests, reviews, and examinations is highly important. It is suggestive of the teacher's philosophy and method. But above all, if pupils have any respect for these tests, reviews, and examinations, the nature of them will very definitely determine the kind of study given by the pupils, and the type of historical material with which they will deal. More care and less flippancy should be exercised in the selection of questions asked.

Enough has already been indicated as to the value and nature of method in general. Under the various divisions of history will be given more specific directions and discussions.

References

Robinson — The New History — Macmillan.
Johnson — Teaching of History — Macmillan.

ANCIENT HISTORY

Aim — Results in ancient history often fall far short of what is so earnestly desired and of what is quite possible. The study of American history or of modern history is sure to reach the pupils **somewhere** in their lives, and **some** possible points of contact are sure to be made by even the most superficial study. But when ancient history is undertaken none but the most skillful teaching and the most careful study on the part of both the teachers and pupils will even approximate worthy results. In this work, if in any, must there most surely be clearly perceived aims. Some of these aims may be stated as follows:

1. To gain an understanding of the fundamental explanation of the ancestry of modern institutions.

2. To secure some conception of the modes and customs and manner of living of the early peoples in order better to appreciate and evaluate the things of modern life.

3. To learn something of the philosophy of life and of living in order to appreciate the advances we ourselves have made or to select the characteristics which have been neglected and which are still worth our attention.

4. To see clearly the political philosophy which in some measure has been the ancestry of that of our day.

5. To learn how a people, a civilization, and a nationality develop, so that a future world may be properly constructed.

There will be little consistency unless some attention is given to the general aims of history as given on preceding pages in this manual. Too often the study of ancient history is considered merely as something to be put into the course of study because it is a traditional and conventional subject, or because it has had in the past a fairly good reputation for developing culture, or because it has been desired by the teachers of Latin or Greek or because of one or more of a dozen other reasons which do not make for very much inspiration either in the study or in the desire for study of ancient history. But when there are clearly seen a few large ideas, or a few general movements or tendencies which have something to do with explaining present life, every boy and girl must naturally be interested to some extent in certain phases

of such study. It is thus the business of the teacher to find what those interests are and then tie them up with the proper aims of this study. But unless those aims are in the mind of the teacher, there will be merely an evaporation of the interests of the pupils, a fleeting and transitory attention. This may be illustrated concretely.

In the study of ancient history we come at the proper time to the dissolution of the Roman Empire. We learn that there was a great barbarian invasion of Rome at about this time, but that information does not arouse any very great interest in the episode. However on closer examination we discover that the term "barbarian invasion" really means "German invasion." We then begin to associate "barbarian" with "German" as used during the World War. The word "Hun" begins to have a greater significance. Presently we become wonderfully interested in the great invasion made into Rome, largely because it has revealed some characteristics of an invasion made by the Germans fifteen centuries later. Clearly enough the **aim** with which we study the Germanic invasion of Rome has directed the attention to the significance of the event in ancient times.

By way of further elaboration of this event, the teacher can motivate the entire study of this barbarian invasion. There are some striking similarities in these two invasions fifteen centuries apart. It becomes more astounding as it is discovered that a German propaganda was carried on in Rome by the Germans, which becomes perfectly intelligible on reflection. How these "barbarians" secured control of the Roman army through its officers who were of German origin recalls another time centuries later when the Germans gained control of the armies of Austria-Hungary, of Bulgaria, and of Turkey. To the teacher who really has a desire to motivate, there will be no difficulty in this particular period of history, which period in the past has not seemed of either particular interest or value. It does make a difference as to the aim which directs our study.

This clearly illustrates how valuable the study of ancient history may be made, once the way is cleared so that the really big things may be seen. And unless some definite things are in mind there will result only a confused and vague notion of ancient history.

Material — The teacher should refer to the discussion of material in general for the study of history in preceding pages of

this manual. Also should be consulted the discussion of material under modern history. With those discussions in mind it will be of value to suggest the following sources:

1. The adopted text.
2. Collateral reading on special periods of ancient history.
3. Books discussing special phases of ancient life, such as customs, feasts, household furniture, etc.
4. Good translations of the Roman and Greek classics, such as Bryant's Illiad and Odyssey; Conant's Aeneid, etc.
5. Biographies of the heroic characters, as Socrates, Alexander the Great, Caesar, Charlemagne, Luther, etc.
6. Interesting portions of documents found in various source books.
7. Books of myths and legends, such as Guerber's Myths of Ancient Greece and Rome; Bullfinch's Age of Fable; Gayley's Classic Myths in English Literature, etc.
8. Selections of literature, as
   (1) Macaulay — Lays of Ancient Rome.
   (2) Tennyson — Idylls of the King (portions only).
   (3) Byron — The Destruction of Sennacherib.
   (4) Bulwer-Lytton — Last Days of Pompeii.
   (5) Wallace — Ben Hur.
   (6) Kingsley — Roman and Teuton, pages 1-16, "The Forest Children."
   (7) Byron — Rome.
   (8) Riley — The Wandering Jew.
   (9) Byron — Modern Greece.
   (10) Byron — Siege of Corinth (Capture by the Turks in 1715).
9. Pageants portraying Greek customs, heroes, etc.; also smaller plays with Greek content.
10. Observation of architecture of private and public buildings.

Etc., etc.

Method — In the teaching of ancient history there is little if any difference from the teaching of modern history so far as

method of procedure is concerned. The teacher should make a thorough study of what is said under modern history and apply as far as possible to ancient history.

It is true that the connection between ancient history and present-day life seems more remote than is apparent with modern history, but that fact is no indication that its connection is any the less vital. Because the roots of alfalfa extend to great depths one cannot say that they are any the less necessary or important to the plant. It may be difficult sometimes for the teacher as well as the pupils to see the connection of many of the facts of ancient history with the institutions of our day, but thorough and careful examination will yield fruitful results.

However, just because it is rather difficult to establish relations between ancient history and modern life it is all the more necessary that the teacher of that subject exercise a correspondingly greater degree of skill. If, after the most careful study and analysis, the teacher finds it impossible to discover relations, very excellent judgment will be exercised if those particular facts or portions of ancient history be entirely omitted. Without question those portions of any subject will be best taught whose relations appear the most clearly. Courage is demanded sometimes to as great a degree in daring to omit certain things as in attacking them. To this ancient history is neither an exception nor peculiar.

In addition to what is given under modern history, it might be valuable to give some concrete suggestions and to make some observations.

In the days of the World War the term democracy was often and widely used, though not always with its exact connotations. The study of Grecian history ought to be of significance in that connection. Indeed Greece seems to have been the home of real democracy, in spite of the fact that imperialism found its advocates even there also. One is struck with the fact of the age-old struggle between democracy and imperialism no less than with the additional fact that there has been a wonderful victory of democracy over imperialism. These facts suggest the possibility of motivating the study of Greek history with the problem of finding out to what extent democracy developed in Greece, and what were its characteristics. Or one may take the opposite problem of the growth and development of imperialism with its

attendant difficulties. Or again one may contrast the developments of the two. In any of these problems will come the study of the Confederacy of Delos, and the "Athenian Empire." As the development of the problem proceeds, it will be observed that there were the opponents of imperialism as well as the advocates. Indeed it will be rather easy to classify whole nations as opponents of imperialism or as favorable to it. What part danger played in encouraging imperialism should be noticed. The fact is that democracy demanded the complete autonomy of the cities, while safety demanded a greater centralization even if not to the extent to which Athens attempted to impose it. How much can be gotten from such a study will depend entirely upon the teacher, for the subject itself is rich in its possibilities.

In the study of Roman history material and opportunity for discussion on imperialism are too abundant and apparent to need comment. The early expansion of Rome in the control of Italy brought its own problems of colonial policy and government. How Rome developed her colonial policy increases in interest if the colonial policy of the United States or of England is compared and contrasted with that of Rome. Not because Rome **desired** a colonial policy, but because she was **compelled** to have one did such a thing arise. War with its conquests demanded some sort of control of the conquered territory, and the colonial policy was the result. Wars of conquest always bring serious problems. Both the dangers and problems should be observed. Perhaps both have been factors in the decrease of the number of such wars.

The class struggles in Rome have a striking significance for the man of today. Indeed not all such struggles have been entirely eliminated, but on the other hand one is tempted sometimes to believe that they are increasing. In such relations and connections the struggle between the patricians and the plebeians developed a new interest. While discussing this struggle there will also come some emphasis upon the land question with its tax and distribution. Certainly such issues are not dead yet. Perhaps when the age of such a struggle has been discovered there will be fewer people with confidence in its easy and flippant solution. It will be a distinct gain to the American people when a healthy respect for the magnitude and seriousness of such a struggle is developed. Only then will the American people be willing to devote some time to a scientific consideration of labor

difficulties, taxation, and distribution of wealth. The teacher of ancient history who fails to develop a proper spirit and attitude towards such questions fails in a very prime essential.

Some very striking illustrations of modern organizations and institutions may be secured from the content of ancient history. This very fact alone will result in a little more respect for present institutions and organizations which have ancestors.

It is a rather curiously interesting discovery to the pupils to find a League to Enforce Peace in the days of Philip II. of Macedon. Upon this league Philip II. of Macedon based much of his sometimes disputed authority over some of his neighbors. Each member of this league committed himself as follows:

"I will not bear arms for the purpose of injury against any of those that abide by their oaths, either by land or by sea. I will not seize with hostile intent a city or fort or harbor belonging to any of those that share in the peace or by any art or device whatsoever. I will not overthrow the kingship of Philip and his descendants (in Macedon) or the governments existing in the several states at the time when they swore the oaths regarding the peace. I will do nothing contrary to this treaty myself nor shall I permit another to do so if I can prevent it; and if any one does violate his covenants, I will give aid to those who need it according to their demand. I will make war on him who violates the general peace, according as it may be required of me and the hegemon may order."

Verily there is precedent for the establishment of a League to Enforce Peace as advocated during the World War. Perhaps information concerning this ancient one may give some valuable suggestions on the proposed modern one.

To know what the history is of the Balkan states will serve to explain much of the seeming common confusion concerning them. The part they played in the World War may then be more clearly understood. That there will never be a permanent European peace until their history, and their rightful status based upon their history, have been determined and established seems perfectly clear. For European peace alone would be worth the entire time devoted to the study of ancient history, if that were the best or only way in which such peace could be gained.

The class will be interested to trace the movements which have made these Balkan states the battle ground of the early centuries as well as of modern times. They ought to see the

resulting mixture of races and peoples which always comes from such conquests and partially successful conquests. This mixture has led to almost endless confusion and entanglements. But in spite of it all there has been preserved the spirit of nationalism which finally reached such proportions in the first few years of the twentieth century that both Germany and Austria were alarmed for the possible future of their own commercial and industrial interests of the near East. To trace this nationalism, the conflict of Russian and Germanic interests will prove fascinating to the pupils, if they are properly directed by a **teacher of scholarship and vision.**

To those teachers who have caught suggestions from the examples given showing how the study of ancient history should be directed to give the best results for the boys and girls of the present and thus the men and women of the future, it will be superfluous to multiply examples. They will see that the current talk of democracy will be a little more meaningful when the early democracies of the past have added their bits of illuminating information. The Reformation has left its impress and effects upon modern sectarianism and denominationalism, which such a seeing teacher will skilfully use. The size, increase, growth, and dissolution of the empire of Charlemagne helps to give a background for the understanding of the discussions relative to the claims for Alsace-Lorraine. Both enthusiasm and interest will be unbounded in tracing the story of those early nations who were obsessed with the passion of world domination. Then it will seem perfectly clear even to high school pupils, if not to Germany, that such ambitions might be attractive and inspiring, but they are not based on very sound judgment. All these things though quite remote **in time** have still a very pregnant lesson for the present generation. Some clear conception will thus have been gained of the logical continuity and consequential relations of historical development. **The past can never safely be wholly ignored.**

Whatever method is followed there must be assurance that the **meaning** of history is emphasized so well that the pupils can readily see beyond words and events. Most teachers readily enough agree with this statement, but close scrutiny of their daily work does not always reveal evidence of it. Too often instead the recitation and discussion give impression of mere words and phrases or array of facts that carry no meaning, and which

should carry significant meaning if only they were interpreted. It is particularly tempting to the teacher of ancient history who deals with facts concerning the long ago and therefore so frequently are not considered as having a bearing on modern life.

If, however, it is admitted that there are so many facts in ancient history which do not pertain to modern life, that is not admitting that ancient history has no message for the present. It is only an admission that the particular portion selected by the teacher or the author has no bearing on the present. It only adds a greater burden to the teacher or the author to be more careful in the selection of facts which are of real value. This can be illustrated concretely.

Frequently authors treat that period of the Antonine Caesars by merely cataloging the names of the rulers and making some insignificant statements concerning them. The following is a quotation from a popular history:

"Nerva (96-98)— The Senate chose the next ruler from its own number; and that emperor with his four successors governed in harmony with it. These princes are known as the **five good emperors.** The first of the five was **Nerva,** an aged senator of **Spanish descent,** who died after a kindly rule of sixteen months."

Now ordinarily a man who ruled any country only sixteen months must be a remarkable man and do remarkable things to be given any attention at all. From the above paragraph is anything said which indicates the unusual ability of Nerva? Is it clear **from the paragraph** that he did anything of historical significance? Is there anything about the paragraph which justifies its existence in a history for the high school? Did the author make these statements in order to draw some conclusions later? If so he forgot to draw any conclusions, for in the five pages devoted to a discussion of the Antonine Caesars not a single reference is made again to Nerva. Perhaps the author did not think him of sufficient importance! This same author has done far better in his treatment of the successor of Nerva:

"Trajan (98-117 A. D.) was the adopted son of Nerva. He was a **Spaniard by birth** and a great general. Once more the boundaries of the empire were advanced, though with doubtful wisdom. Trajan conquered **Dacia,** a vast district north of the Danube, and then attacked the Parthians in Asia. That power was humbled, and new provinces were added **beyond the Euphra-**

tes. These victories mark the greatest extent of the Roman empire.

"Trajan's reign was the most famous in Roman history for the **construction of roads and other useful public works throughout the provinces.** Despite his wars, his rule was humane as well as just. By loans from the treasury, he encouraged the cities of Italy **to care for and educate many thousands of poor children,** and slaves were protected by strict laws against cruelty. A slight persecution of Christians took place under this emperor."

How many teachers would insist on the same accuracy of memory of the author's discussion of Nerva as of that of Trajan, and yet with what justification, probably not even the teachers could say. There may be some doubt about the historical value of some of the statements about Trajan, but there is more **meaning** in them than in those about Nerva.

In this same author's discussion of Charlemagne there is found some significance of the wars carried on by him. We are told that "whatever we think of the methods, these wars were the most fruitful of the century. **The long pounding of thirty years laid the foundation for modern Germany."** Seemingly fearful that teachers would fail to put the proper value and interpretation on these wars, the author states in clear language their significance. How many teachers even then would fail to have pupils see the true meaning! The pupils may easily say the very thing the author has said and even in the very same language, but still fail to understand. The teacher has a responsibility in seeing to it that they do understand. The teacher has yet much to do even in using the best of texts.

Teachers sometimes miss the point of the author's story because they fail to evaluate his sentence or see relations. This can be illustrated by the following quotation:

"It was not, however, given to Odoacer to establish an enduring kingdom on Italian soil, for he was conquered by the great Theodoric, the king of the East Goths (or Ostrogoths). Theodoric had spent ten years of his early youth in Constantinople and had thus become familiar with Roman life and was on friendly terms with the emperor of the East.

"The struggle between Theodoric and Odoacer lasted for several years, but Odoacer was finally shut up in Ravenna and

surrendered, only to be treacherously slain a few days later by Theodoric's own hand."

Now all this does not mean much to the boys and girls and perhaps not to anybody else. These facts are not startling, nor do we grow very excited over them. It does not appear that they have any connection with the present day. In other words they need to be interpreted before they are interesting. This the author does for us after several paragraphs follow, on the next page, a paragraph of which is typical:

"While Theodoric had been establishing his kingdom in Italy in this enlightened way, Gaul, which we now call France, was coming under the control of the most powerful of all the barbarian peoples, the Franks, who were to play a more important role in the formation of modern Europe than any of the other German races."

The teacher who permits the pupils to read the first paragraph quoted above without even connecting them with the series of paragraphs, the latter one quoted above being typical, has not only permitted the impression to grow that such material is not worth while anyway, but has chosen to encourage the already too prevalent tendency to neglect to establish relations and to see things in unity. These things happen in the ancient history class every day. Is it because teachers themselves do not see the larger meanings or because they believe that somehow, sometime, perhaps these detailed facts may touch human life? Do such teachers trust to sheer good fortune for the potency of their instruction? The reason must be squarely faced; it can no longer be ignored. It is time for a searching of hearts.

Perhaps in the cases cited above it would be a good thing to have pupils recite with open books before them. The teacher who is always asking questions of information will of course not permit books to be open, but the one who is more anxious to teach pupils to think and draw conclusions will not be so horrified because open books are used. Much can be discovered about a teacher by the way books are used (or not used) in class.

It is impossible to mention all the fruitful topics of ancient history. They can be discovered and developed by the teacher with earnestness and ability. It is very important that teachers have the right attitude toward ancient history and know how to approach the subject. To understand "how it is done" is often

illuminating and helpful. It is valuable to know how to work back from present life to the antecedents. The question of taxes, common as it is, hardly suggests to the average teacher any historical connection. And yet it has a direct connection with feudalism. It is easy to see how the king, or feudal lord, was quite willing to accept **payment** in lieu of **service** from his subjects, and the various other connections which the subject of taxes has. These connections and phases can all be made interesting and useful to the citizen of today. The traditional reason for the existing reluctance in the payment of taxes can be understood and perhaps eliminated. The proper function of the church has not been determined wholly by the people living today; there is a history of this notion which would be valuable to every citizen. And so one might enumerate the many things which have ancestries reaching to very ancient times, but the surest way to see what those things are is to have a right attitude and an inquiring mind which will lead one to the proper relations. The teacher of ancient history has as great an opportunity as any other teacher; the only difference being that he must be a little keener in **seeing** the possibilities.

If men and women are ever to think in historical relations, and to the best possible advantage, boys and girls must be **taught** to do so in the public schools. The things indicated above have this for their aim. A further suggestion might be offered relative to assignments. The very fact that problems are sometimes difficult for the teacher to discover suggests that perhaps the pupils might be given opportunity to discover them, even though some difficulty be encountered in doing so. Pedagogically the best results are obtained only by such procedure. The teacher might well ask the class occasionally to read carefully an assignment with the aim of seeking to discover what things of value, if any, can be found in it. Their ability to evaluate will thus be discovered as well as developed. To be sure the teacher will never assign such a lesson unless he first knows the answer to his own problem. Sometimes pages or even whole chapters have no particular value, and it is an excellent thing to have the pupils discover that also. Not only should they discover the importance, or lack of it, in the text, but they should be compelled to support their conclusions with sound reasons. This demands always thorough scholarship, and frequently a high degree of originality and ingenuity, on the part of the teacher if any value at all is to be derived from such a lesson.

It will mean preparation in the organization of the problem of trying to discover something of value just as truly as though a problem of value were assigned for the class to solve. Careful reflection on the part of the teacher should reveal his own procedure in finding a problem as well as in the solution of it. This procedure should then suggest how the pupils are to attack their own task. Perhaps the following will be of assistance to the teacher:

First of all there must be a clear statement of the things to be done, namely, to discover whether there is anything of value in this particular assignment.

Next will come a consideration of the following things and probably in this order:

I. Reflection on the more pronounced problems of the day.

II. Reading through the assignment with the aim in mind, and mentally noting possible values.

III. Re-reading of the assignment and making a careful analysis of these possible values.

IV. Study and arrangement of reasons supporting the conclusions reached.

No more should the pupil be set adrift without knowing exactly what is to be done, and the order in which it is to be done, than in any other assignment. Because they are to discover something is all the more reason why they should be properly guided. Methodical procedure always brings good returns. Such a method of conducting a recitation demands not less, but emphatically more, preparation on the part of the teacher. Religiously following the text book requires the least preparation on the part of both teacher and pupils; it also gives the least results.

The use of historical geography should find a very important place in the class in ancient history. It should be noted that not merely geography, but **historical** geography, must be emphasized. It is not enough to know the present boundary of Greece or Turkey; we must know their original boundaries as well as their expansion and contraction. It is not sufficient to study the present geography of Italy, but real history insists on a thorough knowledge of Italian geography of the past. We must realize that geography is not a static but a dynamic study.

Much use can be made of the Bible in the study of very early history. Care must be exercised not to discuss creed or sectarianism, but to use such study for the light it may shed on the descriptive or narrative side of history. This can be illustrated.

In discussing Assyria and particularly its fall, added interest will result if the Bible narrative concerning Ninevah be read at the same time. Let the pupils consult Isaiah, XIII, 16-22, and Jeremiah, L and LI. Similar use might be made of the Bible in reading about Chaldea, Damascus, Jerusalem, etc., etc.

If the suggestions given under method be carefully studied and an effort be made to understand the theory which supports them, the teacher will better know how to formulate his own problems, and become more systematic in his own work. It is a good thing to use the concrete suggestions and problems herein given; it is far better to be able to originate and solve others, for then they become more really the teacher's own. It ought to be evident that it is possible to give only typical illustrations instead of an exhaustive list which can be accurately followed.

How valuable the study of ancient history will become to any class will be determined in no small measure by the teacher's or author's selection of facts as well as his treatment of them. It should be understood that each age has particular problems of its own, for the solution of which it needs certain particular information. It is equally true that in successive years there may be emphasis upon different problems and historical information, for the nation's needs and environment continually change in as true a sense as do those of an individual. The teacher who best understands what these things are and who has historical scholarship is the teacher who makes the study of ancient history the most interesting and the most valuable.

MODERN HISTORY

Aims — Through modern history the pupil should gain such a knowledge of the beginnings and growth of the elements which blend to form modern civilization as will enable him best to interpret this civilization, and thereby to become a good citizen not only of his own country but of the world.

Second, the human interest aroused through the study of this subject should become a force active throughout life to impel the boys and girls toward saner and more helpful relations with those around them.

Third, modern history affords a large number of problems very similar to those which constantly confront each individual in life. This subject should therefore strengthen the belief in the efficacy of reason in the solution of these problems; and should afford training in the procedure of reasoning out such solutions.

Finally, the field of literature dealing with modern European history is so wide and so fertile that certainly one of the chief aims of the teacher must be to help the pupil appropriate from this social heritage much that will enrich and strengthen his whole life.

The average American child does not always appreciate the antecedents of American institutions nor their relation to those of contemporary Europe. As a result sometimes he has a feeling closely akin to that of contempt and even scorn for the things of other countries. Surely in the study of modern history the teacher would do well to see that this feeling is not produced but on the other hand that some notions be given of the proper evaluation of European activities which will lead not only to a more intelligent appreciation of American ideals but also to a more sympathetic understanding of international relations.

Americans are sometimes considered quite provincial. It is the business of the teacher to help dispel this notion held by other countries. This can be largely accomplished in the class in modern history. But it will be accomplished only accidentally unless the teacher has clearly in mind the first aim stated above.

It would be an interesting experiment for the teacher of modern history to have the pupils state in writing just what they expect to derive from their study, even after the work for the year has been under way for four or five months. It is quite likely that the results of such an experiment would emphasize the necessity of having definite things in the minds of both teacher and pupils and working steadily and continuously toward the accomplishment of these definite things. But such things can never be accomplished unless some of them are present in each daily lesson. Without their presence no teacher is entitled to hope for the best kind of world citizenship.

Enough has not been done when the pupils, **as such,** have been taught the relations of America with other countries. Some good certainly will have resulted from that kind of study. But these results should be **abiding** and the public has a right not only to expect, but to demand, that when these pupils have become adult citizens they will continue to take an interest in foreign affairs. Perhaps there should not be less interest in reading the funny columns of the newspapers and magazines, but there should be an increased interest in reading the items and articles relating to foreign activities. The day of America's isolation from world affairs has gone never to return. From even a selfish point of view Americans should know what are the active and important operations abroad. Boldly and unafraid should the instruction in modern history make determined attempts to eliminate narrowness and prejudice from American thinking and compel a bigger and more productive vision. Such an aim is laudable and worthy, is challenging in its importance to both teachers and pupils, and is an insurance for enduring American principles. Teachers should test their own **daily** instruction in modern history by such an aim and assure themselves that such significant results are actually being accomplished.

The importance of keeping this aim in mind, that of knowing foreign activities and their interpretation, can be well illustrated.

When the famous Boxer movement arose in China many people passed over the news announcing it as merely one of those numerous troublesome difficulties which seem characteristic of China. But when it became so great as to invite the attention of all the powerful nations including America, the real origin of the Boxer movement had been forgotten by many people, if

indeed, they had ever known. When the great international army had marched on Peking the trouble came to an end, but not without setting some notions in movement which were bound to have a future bearing. In the first place the attitude of Germany in her greedy desire to carve China was never forgotten by China, and was a great factor in inducing China to throw her influence against Germany and with the Allies when the World War broke out. Again the chivalrous attitude of the United States did very much to establish friendship between this country and China. Again when the United States, after accepting her share of the indemnity which China was forced to pay to the powers engaging in suppression of the Boxer movement, returned its share to China, the friendship was still more firmly established between the United States and that nation. China's act in using the returned indemnity for educating her young men in the United States was an acknowledgment of her gratitude for this country. The incident of the Boxer movement therefore not only was but is a thing of significance.

When war broke out between Russia and Japan in 1904, there was some superficial interest in the news announcing it. Japan's vigorous and lightning strokes at Russia aroused a curious interest, fascinating but transient. Again when President Roosevelt brought about peace between these two countries, there was some added interest, both because Roosevelt was a factor in it and because the place of meeting of the peace delegates was within the limits of our own country.

To many people the signing of this treaty of peace at Portsmouth, New Hampshire, is a forgotten incident, whose sole significance is that it forms a topic to be discussed by the class in modern history. But Japan has never forgotten that President Roosevelt vigorously opposed the payment of a large indemnity to Japan by China. It may be uncomfortable, but it is nevertheless a cold fact that Roosevelt's attitude angered Japan and her friendship for the United States was severely tested.

But let the teacher beware using this fact in creating a feeling of resentment on the part of America against Japan. This mere fact is no cause for war between the two countries and no jingoistic spirit should be manifested in its teaching. Rather should a calm deliberation over it result, and a greater attempt be made to lessen whatever of resentment exists between Japan and the United States. The teacher should always remember that the

schools of this generation may be responsible for war between two countries in the next.

In 1905 a conference of all the great powers, including the United States, met in Algeciras, Spain, for the purpose of coming to some agreement over the question of Morocco, which had caused some friction between various countries, particularly between France and Germany. In brief Germany always contended that she had never received fair treatment over Morocco in the past, and particularly at the conference in 1905, since France gained complete control over Morocco in 1910. When Germany sent a war vessel to Agadir in 1911, as a warning to France, war in reality seemed near, but it was happily evaded.

The people of this country may have been passively interested in the conference at Algeciras, Spain, in 1905, but it was not a deep, and certainly not an **abiding** interest. It would be a good inquiry to make as to how many teachers of modern history were even interested in this affair over Morocco. The pupils who at that time knew even in a superficial way this foreign incident, are now men and women of adult citizenship. Do they connect it with any event of the present day?

These three illustrations above emphasize the necessity of keeping the second aim of modern history in mind. Each of them has a bearing on the World War. China's alliance against Germany was not an accident, nor a result of fortuitous circumstances. The American people had a reason for being concerned over Japan's possible activity in the World War. Germany's hatred toward France was intensified and added to her already burning desire to crush France once for all.

It is of course easy to look backward and see how things came to pass, while it is difficult to look into the future and anticipate possible events based on an intelligent understanding of the present. But it is none the less important for instruction in modern history to teach the present boys and girls, and the future men and women, to give some active attention to foreign events and to attempt to understand them. The three illustrations above might have been multiplied into many more of even more recent occurrence. When men and women come to **interpret** and to understand in terms of **relations,** the events of the present day, even world wide, will be intensely interesting and of profound value to the citizens of the present as well as of the future.

Material — The stupendous changes wrought by the great World War seem to indicate that the world stands today at the very threshold of really modern history; and that a strictly modern European history need not go back very far. As a background for the proper understanding of these present changes certainly the great movements of the last three hundred years should be familiar to the student. It is difficult and perhaps not wise to attempt to fix upon any certain point as marking off ancient from modern history. It seems better to find the critical turning point of each phase considered. Thus perhaps the invention of the steam engine should mark the turning point between mediaeval and modern industrial history. If political history is considered, the beginning of the struggle between the Stuarts and Parliament might mark the opening of the modern epoch. If geographical change be thought of, the fall of Constantinople or the discovery of America by Columbus might be accepted for the point of turning. Some who would contrast Teutonic with Mediterranean civilization go back to the fall of Charlemagne's empire. The material therefore for modern European history has no absolute time limit marking it off from mediaeval history, but should cover at least the last three centuries in most phases of the subject.

Among the European nations the English have undoubtedly contributed most to modern American life; also their present national life has more in common with ours than that of any other nation of Europe: for these reasons English history will receive greater emphasis, and collateral reading draw more largely from the English historians and biographers than from any other source. But this feeling of close relationship with the British Empire should not prevent a sympathetic study of the customs, institutions, and great personalities of the other European nations. In fact, the study of European expansion throughout the world affords an excellent opportunity to broaden our understanding of the peoples of other races and continents. Therefore, while the emphasis is upon modern European history, and particularly English history, still the limits are world-wide, insofar as it may be necessary to go in order to reach the aims outlined above.

There are, of course, certain psychological limits to the subject of modern history as presented in a secondary school course. Recognizing the fact that judgments should be formed,

still the difficulty of passing correct judgment upon the act of any individual or nation carries added danger when entrusted to the youth of secondary school age. The fact that history is especially likely to stimulate the consideration of ethical values, should warn the teacher to guide his pupils most conscientiously in this field. On the other hand, the concrete imagery and human interest of history make a strong appeal to the pupils of this age. These facts should suggest the nature of the limits marking off secondary school history from college work on the one hand and elementary school history on the other.

The sources of this material have been quite fully indicated under the general topic of History. The adopted text will, of course, be the basis for the class work. The collateral reading should be so assigned that the class may have an introduction to many well written books dealing with special phases of the subject. Carlyle's French Revolution, dealing with one great epoch, and Andrews' History of England, dealing with the more peaceful achievements of a single nation, are two types of such material, while still a third type may be found in the latter half of the History of Commerce and Industry by Herrick.

A carefully compiled notebook on the great World War containing maps, pictures, and other illustrative material would be a valuable legacy from the history class to the school library. In the same way a really valuable body of source material gleaned from magazines and newspapers should be placed in the library by each successive history glass.

Literature will furnish much to vivify the history work, e. g., Mrs. Browning's poem, The Cry of the Children, as a picture of child labor in England, and Dickens' Pickwick Papers for a portrayal of England's debtor prisons.

Morley's Life of Gladstone and the first six chapters of Johnson's Napoleon are types of biographical material which should be available.

Method — Observation of the prevalent methods in the teaching of history would almost lead one to conclude that Latin and mathematics have and keep their hold so strongly in the educational scheme, because in these subjects the teachers do not do all the talking. If a second cause need be sought it could probably be found in the fact that in these two subjects certain

definite activities are expected of the pupils and the tests of these activities are so easy to apply. Granting that teachers of history and other social sciences are peculiarly liable to forget the fundamental principle, "No impression without expression," and that their subject matter makes it very easy to talk without saying much, it is the purpose of the following paragraphs to suggest ways of attaining the second value in history no less than in Latin and mathematics.

Illustration I. A lesson in which the teacher's aim is to train pupils in the scientific study of history.

Let the **assignment** be the following problem: To determine the chief cause of the failure of Metternich's international police system. This would take the place of the assignment as usually given, "Take so many pages in advance," or "Study the events between 1815 and 1830," or "Answer the questions at the end of the chapter." When the assignment is made questions should be asked sufficient to bring teacher and pupils to a common understanding of the term "Metternich's international police," also sufficient to show that the system did fail absolutely in the French revolution of 1830. Preferably the assignment should grow out of the discussion of the preceding lesson. This assignment might naturally come from a lesson on political conditions in Europe after the Congress of Vienna.

Let the **procedure of the recitation** be as follows:

A. Careful statement **by the pupils** of Metternich's plan and of how and when the climax of its failure became apparent.

B. **Pupils** advance various hypotheses to account for this failure. (Some easily gathered from any good text follow.)

1. The adoption of the "Carlsbad resolutions" attacking the freedom of the press and liberty of teaching stirred resentment of the progressive spirits of Germany.
2. National aspirations had been awakened in Spain and Italy by the revolution which were not easily stamped out by the Austrian police.
3. England unwilling to lose trade with South America opposed the conquest of the South American colonies.
4. The United States was stirred to issue the Monroe Doctrine; etc., etc.

C. Examination and comparison **by the pupils** of these hypotheses should reveal two common elements: The weakness of the selfish motive upon which the system relied, and the rising tide of the revolutionary spirit.

D. The **pupils** should formulate a statement which should include these common elements as the cause of the failure of the system.

E. While the problems of social science do not admit of the same sort of positive test which may be applied to the solution of a problem of physical science, an interesting and profitable **check of the above solution** might be found in the following **assignment for the succeeding lesson:** It is now being proposed to substitute for the great national armaments and navies a world league to enforce peace. Examine this proposed system and determine what conditions appear to make it more feasible than Metternich's system.

It will be observed that the above lesson provides for activity on the part of the **pupil.** Experience has shown that even the assignment may profitably come from a class which has been trained in this type of work. This may answer the first difficulty that appears to many teachers in first attempting such work; viz., Where shall I find suitable problems? Let the class try to find them! The second difficulty is that the pupils will not select the proper data and make the proper comparisons. The answer is that perfection is not attained at a bound, but must come through many failures. If the work appears very difficult, it may be advantageous to employ frequently at first a lesson from the text or collateral reading in which the problem has been stated and solved by the author, it being the task of the pupil to examine critically this solution. This is somewhat similar to the work done in geometry when both theorem and proof are given. For suggestion of this type illustration number two is offered.

Illustration II. A lesson from Creasy's Fifteen Decisive Battles in which the teacher's aim is to train pupils in the scientific study of history.

Let the assignment be as follows: Read the author's discussion of the battle of Pultowa and examine his attempts to prove that this is one of the decisive battles of history.

Procedure of the recitation: (The class may be required to place upon the blackboard the author's demonstration and defend it in much the same form they are taught to use in a geometry demonstration.)

A. **Given,** the contrast between the proud position of Sweden and the insignificant position of Russia before the battle; the influence of Sweden in the Thirty Years' War and in the Treaty of Westphalia; Cromwell's desire for a Swedish alliance; the early successes of Charles XII. against Peter the Great; etc.

B. **To prove,** the reversal of these respective positions after the battle and to show the far-reaching influence of this change.

C. **Line of argument:**

a. Reforms of Peter the Great endangered by the battle. Importance of these.

b. The great development of Russia after the battle; able to withstand Napoleon in 1812; etc.

c. The loss by Sweden of important provinces; Finland, Ingria, Livonia, and districts east of the Baltic; acquisition of most of these by Russia.

d. The importance of a first-rate Scandinavian state in the north as a check to the progress of Russia.

e. Russia as the protector and leader of Pan-Slavism.

D. **Conclusion:** The great and yet unsettled struggle of Slav against Teuton may, therefore, date from this battle.

After the pupil has acquired some skill in following such a deduction in the text, he may be provided with an exercise for developing original proof from newspaper and magazine articles. Such a suggestion is offered in the next illustration.

Illustration III. A lesson from current material in which the teacher's aim is to train the pupil in the scientific study of history. Such an assignment might grow naturally from the discussion of Russia's part in the World War. The proper development of the assignment might well occupy the energies of the class for some time, and involve the reading of many articles in magazines and newspapers as well as much careful thinking.

A. **Given,** the relative advantage of Germans and Allies on May Day, 1915, the defeat of the Russians at the Dunajec, and the disastrous German offensive against Russia which followed.

B. **To prove,** the immense consequence of the advantage gained in this battle.

C. **Line of argument:** (It is not supposed that a secondary school pupil will be able to gather from his reading all the consequences of this battle; the new type of tactics developed by the Germans; the almost complete destruction of Dimitrieff's army; the narrow escape of Brusiloff; the evacuation of Przemysl; the restoration of Galicia; the collapse of Russia, etc. But the effort to use discriminatingly some of them is the desirable thing.)

D. **Conclusion:** The formal statement of these consequences.

Turning from the aim discussed in the illustration above, it may be well to consider the no less important one of arousing in the mind of the pupil the human interest in history. A concrete presentation of historical matter is no doubt one of the most effective means of accomplishing this result. The reconstruction of an historic scene or the dramatization of some event will do much to vitalize history. Motion pictures, illustrations from the text, available material in museums, observation of newly arrived emigrants, articles of historic interest preserved in our homes, and similar sources may be drawn upon for the purpose. But the difficulty of securing sufficient material of this kind makes it necessary to turn frequently to the next best source—written accounts of those who have looked upon historic events with keen imagination. Such a suggestion is offered in the next illustration.

Illustration IV. A reading assignment made to give pupils concrete imagery for understanding war conditions in the present day as contrasted with those in the French Revolution. **Assignment:** Contrast Goethe's account of his first experience with "cannon fever" as found in his Campaign in France in 1792; Farie's translation, page 77, with the accounts given in current magazines of trench fighting in France.

To use such material skilfully gives the teacher an opportunity to supply the pupil not only with the concrete imagery needed for a broad and sympathetic understanding of history; but provides the opportunity to open one of the most attractive

gates to the field of historical reading. To read to a class the description of James I. of England as presented in his inimitable way by Charles Dickens will certainly stir the imagination of a pupil to a more comprehending knowledge of the character of that monarch than any discussion of the consequence of his acts; it will certainly also lead some who had hitherto not found Dickens interesting to probe a little deeper.

Without attempting to elaborate to any great extent it might be well to give a number of suggestions which are indicative of the possibilities of motivating further the study of modern history through problems which naturally arise in the minds of the pupils as their study proceeds and which throw light upon present-day activities.

When the World War broke out in 1914 many people of the United States felt sure that somewhere in a hidden diplomacy or lurking in the selfish and imperialistic desire of an English autocracy would be found some very fundamental factors which provoked its outbreak. Had not the colonies rebelled and successfully so against England in 1776? Surely England of today was not different from England of 1776.

But the serious student of English history who had read carefully the true story of the growth and development of the English nation knew better than to attribute the war to English autocracy, for he knew that England is quite a democracy. Why then was this not the common opinion of the American people? There is an answer to this question and its answer will most surely throw a large share of responsibility upon the public schools.

The boys and girls of the past few years are the men and women of today who still retain their impression of England received through their study of the American Revolution. That study was not impartial, but prejudiced, narrow, and imperfect. In many cases teachers themselves were lacking in the comprehension of the forces at work in England at that time and of the philosophy underlying their politics and industrial and commercial relations. In many cases also the text books themselves were not written from the correct point of view. Nor is the instruction now faultless.

The truth is the colonies were fighting the battles for the **people** of England and against the **king** and the **blind autocracy** for which he stood. Boys and girls know full well that the colo-

nies were fighting for freedom and liberty, but too often they fail to see what it was freedom **from** and what there was liberty **to do**. They have not always made the distinction between the **king** and Parliament. The result has been that they know only that the people of the colonies had a war with England, but they have failed to analyze the term England. They have associated with this term only the bitter struggle of our forefathers.

To the serious student of English history, however, it is plain that the American Revolution was as much a victory for the **people of England** as it was for the people of the colonies. He knows also that a new era was dawning for England at that time and that steadily and continually England has since been developing a democracy which gave a Gladstone the opportunity and the courage to shake his finger in the face of Queen Victoria and demand that she sign the reform bill for the benefit of England's people.

If then the schools have not measured up to their opportunity and duty in this particular instruction every true teacher will quite naturally desire to do so from now on. How might this be done? Or saying the same thing a little differently, How can we properly motivate the study of English history? To raise the question is to suggest its answer. In the study of English history, as always, we must find some point of contact. The pupils must see that there is some connection between English history and our own institutions.

We have here then an answer. We must see, for one thing, how the **people** of England have gradually gained control over the **king**; how democracy has triumphed over autocracy. To the teacher endeavoring to trace this growth there will be many things which suggest themselves. For instance, the growth of Parliament from the time King John was besieged for that famous acknowledgment of the rights of the people, down through the year 1265 and steadily throughout the remainder of English history even to the present day, its study is fascinating and burning with interest. Then too the study of the industrial revolution in England will necessarily be undertaken for the purpose of seeing how it has eventually developed into the great industrial freedom now enjoyed in England. Here we again meet the principle that freedom in one line is always productive, sooner or later, of freedom in many lines. It will be necessary to make a careful analysis of the characteristics and results of this great

epoch. The various reform bills passed by Parliament need attention. These reform bills were significant not only in their political aspects but for their social and economic as well. A careful study will be made of the great men of England who have been strong advocates of the increase of the rights of the people. The pupils must learn to know O'Connell, Disraeli, Gladstone, Asquith, Lloyd George, and many others, not only in a political and social way but as men who made large contributions to a modern world. The development of English colonies will be studied down even to the present day. The pupils will not fail to note the splendid tribute to English colonial policy given in the hearty support of every one of her colonies in the great World War.

These and numerous other topics for discussion will give the teacher some hint concerning the organization and development of the problem of tracing England's democracy. Such an organization and serious study will be sure to be interesting and valuable. If the teacher insists on thoroughness and refuses to accept any superficial efforts, there will most certainly be developed not only a better and wider sympathy for English institutions and for the English people, but best of all a pleasing satisfaction for a knowledge of the **truth.**

Concerning the study of French history some suggestions may be derived from the indicated treatment of English history. Mention has been made of the industrial revolution in England. Do pupils know that there was such a thing in France? Can they trace its growth and effects in France? If one desired the following problems might form the basis of several lessons on the industrial revolution in France: Why was the industrial revolution in France of later and slower growth than in England? Or if it be desired to see France from a somewhat different angle the following problem might be taken: What gave rise on the part of France to the desire to assist the colonies in the American Revolution? Or again, Trace the similarities and contrasts in the actions and ambitions of Napoleon and the kaiser of Germany. Or still again the following: Why was the French Revolution so violent?

The unenviable position and part of Germany in the World War gave rise to many problems which may form the basis for the study of much of German history. There must be a more thorough understanding of German history and ambitions in

the future than there has been in the past. The following may be useful either for such study or in suggesting others for study:

1. Draw some conclusions from the history of the causes and results of the wars which Germany has had with other countries.

2. Trace the territorial growth of Germany with the view of adding to our knowledge of Germany's possible ambitions.

3. Decide whether or not Bismarck was a Pan-Germanist.

4. What has been Germany's attitude toward the Balkans? Seek for an explanation of it.

5. Trace the growth of the Berlin-to-Bagdad scheme.

6. Study the government of Germany with the view of explaining why a revolution in Germany was so difficult during the World War.

7. Trace Germany's attitude toward the Socialist party in Germany. How do you account for it?

8. What historical evidence exists to show that Germany has grown either more democratic or more autocratic?

Enough has been indicated to show how the history of the more important countries in Europe might be undertaken. There still remains, however, the general European situation which should be understood by the people of America. Perhaps in no other place in all the world do the nations have such a vital relation and dependence as they do in Europe. The teacher who neglects this phase of modern history neglects an understanding of a thing vital to the peace not only of Europe but of the world. The World War ought to give rise to a sufficient number of problems to the live teacher to last a life time. However, the following might aid:

1. Trace the importance of the Balkans in European history with the view of securing some explanation of the world war.

2. Trace the causes of European wars with the view of suggesting some things tending to prevent them in the future.

3. What light do the origin and formation of the Triple Alliance throw upon the World War?

4. Give a possible explanation of the visit of Emperor William of Germany to Morocco on March 31, 1905. What connec-

tion between that and the Congress of Algeciras in 1906 and the incident at Agadir of July, 1911?

5. Why was Russia so easy a prey to revolution in 1917?

6. Account for the continued existence of Turkey in Europe.

7. Trace the efforts of the Powers of Europe to establish permanent peace on the continent, as seen in the various congresses and conferences which have been held. Draw some conclusions for their failure.

8. What historical basis exists for President Wilson's insistence that one of the conditions for peace should be the right of self-determination of peoples?

9. What facts in the Balkan situation gave rise to the hopes of the Allies during the World War for revolution and disintegration of the Austria-Hungarian Empire?

It will not be difficult for teachers to think of numerous problems around which may be centered the work in modern history. Of course securing the problem is only a beginning; the problem must be solved. In its solution will be revealed the skill of the true teacher. He always sees the necessity of properly organizing the material so that there will be the best possible results; merely to state the problem and then permit pupils uselessly to waste time in securing no answer at all or even a superficial one is sure to prove very detrimental to the class and the teacher.

Thus it will be seen that much work remains to be done on the problems stated above before even good results be secured. But this organization should not prove to be beyond the ability either of the high school pupils or of the teachers. A few simple questions asked by the teacher to himself will indicate the line which organization will take. Why should American children study modern history at all? Why should they know in particular about the growth of Parliament in England? Will that knowledge help them to be better citizens? How will it? Is there any similarity between our institutions and those of England? Will that study help in preventing any more world wars? What are the particular things about which our boys and girls should know? What particular large things should they know in order to trace the growth of democracy in England? Having found what these three or four large things are, what must we know to answer each of them? These questions asked by the teacher

to himself ought to awaken a trend of thought which should be productive of good problems and of good organization of them. Too frequently teachers do not know **what** questions to ask **themselves** in order to discover some good problems. Unless teachers **see** clearly the point of contact between the subject matter and the interests of the pupils, they may as well give up their search for good problems. On the other hand when this point of contact is seen, so many problems arise that there is difficulty in making the best choice. Note that the **starting point** is in the teacher's quizzing himself.

The World War caused a searching for forces and factors which would explain. These were not found at first by the masses of the people. They were ready to believe anything and, as always happens in such cases, they were fed upon the wildest and most absurd stuff, accepting it for the really true. How can the teacher of modern history help in dispelling such resulting exaggerated ideas? The teacher who refuses to consider this question as being pertinent to the work is not worthy of his position. Less worthy is that teacher who does not try to prevent a recurrence of such erroneous views in the future.

Just a little reflection upon these things will show that there is serious need for the revival of the study of wars, not from a military point of view, but from the point of view of understanding the causes of such war. It is only by **knowing** the causes of wars that there will ever come the hope of preventing them in the future.

Nor will it be sufficient to know what the economic forces are which have produced such calamities. This information is necessary but not sufficient. Let it be understood that there should be renewed vigorous efforts in seeking economic explanations and relations; to neglect these things is exceedingly dangerous.

But he who refuses to consider that aspirations and ambitions which are not even of economic necessity have much to do with personal as well as national difficulties has chosen to be blind to what ought to be perfectly intelligible and clear. We **must** give more attention to the study of **men** who have been great forces in national life. Often by sheer force of personality and vigor and insatiable ambitions have men directed the whole course and direction of nations, which course and direction have

in no wise been demanded or even sanctioned by wise economic policy. We need to study the philosophy which has been fundamental in the life of a man whom a nation called great. It **does** make a difference what a man **believes.** Such philosophy underlying his belief will determine what direction his activities shall take and with how much tenacity and energy he drives forward to the accomplishment of those ends deemed desirable by him. We must turn more than ever before to the personal element for what explanation can be rightly expected of it.

All this means a more careful and somewhat different study of biography than has been characteristic in the past. We shall have to study anew the desires and ambitions of Napoleon, Cromwell, Bismarck, Cavour, and numbers of other forceful characters who have held all Europe in admiration and often in suspense. The secret intrigues and caprices of diplomats, the unscrupulous methods of accomplishing results, the means used to keep proper information from reaching the people, the motives which have been responsible for undertakings holy and unholy — all these must be known both for approval and condemnation and reprobation as the case may merit. Unless there is more attention given to the study of men and motives there is sure to be more confusion and more inability not only to understand a crisis when it comes, but also to prevent its coming.

The teacher of modern history should turn to the discussion of English in this manual and there read how co-operation between the teacher of English and the teacher of modern history is not only possible but very desirable. Such a topic as the Congress of Vienna furnishes admirable opportunities. This is discussed under English, which see. Other dramatic conventions and conferences will be equally fruitful for the teacher of English and the teacher of history. To such teachers as desire to use such opportunities further discussion of them is superfluous; to others it is useless.

The method which is followed in the study of modern history should naturally and inevitably lead to a full appreciation of the position of the United States as a world power. The boys and girls of this generation and future ones must be taught the danger of such a foolish doctrine of isolation of this country which so often in the past has given such smug complacency. Never again can we be unconcerned about European affairs. But this

concern must never assume a haughty air. On the contrary, the sheer weight of our responsibility must create a seriousness and moderation, but with them also a daring and courageous determination to stand a respected nation among nations. Modern history should reveal our problems and suggest our future plans.

AMERICAN HISTORY

Aim — The teacher will refer to the discussion of the general aims of history in the preceding pages. It is not necessary to repeat in this place what is there said. The teacher of American history who fails to consider that discussion will centainly lose an opportunity of achieving the best results and of coordinating the teaching of history in the various years. Some specific additional aims might be enumerated:

1. To see from a larger view the formative forces which were at work during the early period of American history.
2. To trace the results of these and other forces through the history of the nation.
3. To create intelligent ideals of the nation rather than of sections.
4. To give understanding of American spirit and American institutions.
5. To know the ambitions and purposes of the American people.
6. To appreciate the rank of this nation as a world influence.

These and other specific results will be determining factors in producing a citizenship worthy the hopes and ideals of an illustrious ancestry. In the accomplishment of these things a word of caution should be given. Facts and explanations should never be so presented as to create bias and prejudice. True American citizenship is not to be produced by any wilful warping of the truth. If the history of this nation, honestly, faithfully, and judiciously presented, does not develop a love for it, and inspire one to live for it, the question at once would arise whether it is worth one's love and admiration. Often our history has been so taught and so studied that the impression has been given that our nation has done no wrong, can do no wrong; that our policies and plans have always been justified by the results; that our men and measures have always been ideal — in short that our nation is a fetish instead of a perfectly rational and human development. Often prejudice has been mistaken for patriotism, sectionalism for solidarity. These things need not be. Fortunately the true aim of American

history can be best accomplished by a truthful presentation, unvarnished and untarnished. "The truth shall make you free."

It should not be understood that the above enumeration of things to be accomplished precludes the possibilities of others. There are many more detailed things to be done than are indicated above. Teachers should determine what they are and plan the work so they will result. This planning should be done with care and thought, for thus will selection of material and method be determined.

Material — The various things indicated under aim will suggest a wealth of material. Good teachers in any subject have long ago ceased to regard the text as containing all the material for their work. This applies with equal emphasis to instruction in American history. The naming of a few sources of material will be of advantage:

1. The adopted text.
2. Other texts, though these are not of such great value.
3. Source books.
4. Works of reference, such as those of McMaster, Rhodes, Bancroft, Channing, etc. Portions only to be read. Extended notes by pupils not desired.
5. Texts in special periods of American History, as Paxson's The Last American Frontier, Fiske's Critical Period of American History, etc.
6. Biographies not only of statesmen, but of writers, philanthropists, and industrial, religious, and educational leaders, etc.
7. Debates, orations, and other addresses.
8. Books of travel.
9. Literary works both of prose and poetry, not only of American writers, but of such foreign writers who may have written of some phases of American life.
10. Articles from current magazines bearing upon industrial, political, religious, educational, and social life.

Reference to the general aim of history as well as to that of American history should be made again and again through-

out the year, in order to be certain that the kind of material is selected which will best accomplish those aims. Frequently reflection on those aims will reveal possibilities with material which otherwise would be ignored. Selection of material just **because** it has been enumerated in some list, without clearly perceiving its use in a particular situation, will be certain to produce less good than might be accomplished. There is not sufficient thought given to the selection of material. There is entirely too much material suggested by the teacher for the class to read after the lesson has been read and discussed which should have been given to the class for reading **in connection** with their study, but of which the teacher did not think because the work had not been well planned. It would be amusing if it were not so tragic to see teachers eagerly scampering for collateral and illustrative material during the recitation or promising to bring the book on the morrow. **Some** material can best be used **after** discussion of the subject matter in the text, but certainly there is a great deal of material which should be used **before** or **during** the discussion. Entirely too frequently material other than the text is selected accidentally instead of deliberately.

Biographical material is too frequently selected because of its political nature, as though the political life of an individual or nation were all or even the most important. It should be remembered that Alexander Hamilton was a human being as well as statesman, and that a study of his life in other phases than his political one will yield historical results quite fruitful. To know that Benedict Arnold found pleasure in his social activities among the British, and fell in love with a beautiful gifted woman of Tory tendencies and beliefs, might throw some light on his actions which affected a nation's life. That Henry Clay was a real human being on his estate known as Ashland on the edge of Lexington, Ky., and that here he lived to watch his racers on the paddocks, and that here he had his wine cellars, entertained his friends, had his favorite walks and haunts, might add interest in him as a man as well as a statesman and throw some light on the social activities of his day.

But there is another type of biography which should be given attention. The story of the life and activities of J. J. Hill or of Andrew Carnegie will certainly be enlightening concerning the great industrial life of this nation. The possibilities of a man's usefulness and inspiration in the development of the country

even outside of his own special lines of activities might be well shown in the lives of these two men. Incidentally also boys and girls will get the notion that brains are useful and necessary for other than political accomplishments.

More and more the educational and religious side of a people's life is being studied and considered as throwing an important light on a people's development. The rise and rapid growth of numerous other denominations besides the Church of England in the South and West tell a wonderful tale of the democratic tendencies of the people in these sections of the country. Gathering statistics as to the membership of such denominations as the Baptists, Presbyterians, and Methodists would in itself be valuable in the understanding of a people who lived under the slavery regime or of a people who believed Andrew Jackson to be the embodiment of the virtues of the typical American. The existence of so many academies in the early history of Ohio, and of so many colleges at present, should have a significance in the development of this state and its consequent contribution to the nation.

A touch of added interest can be given when we recall the part our own county has had in the development of academies and colleges. Part of the present school building at Seven Mile formed at one time the halls of an academy. Here, too, in this same academy taught the author of that popular song, Darling Nellie Gray. The origin and growth of Miami University should not be neglected in this connection.

To ignore therefore the biographies of the men and women who have been leaders in the educational and religious life of a people, is to ignore a vital source of material in American history. Nor should we forget those men and women of more recent times who have been carrying forward the work so early begun. Men and women who are recognized as of national importance can be selected so that there need be no denominational or antagonistic feeling aroused.

The biographies of our literary men and women have not been used in the study of American history as much as they should be. There is rich historical material in the biography of Whittier. Pupils are not always aware that Whittier was at one time a member of the state legislature and had even planned for himself a political career. Why he did not continue in this line but

took up another will add both in information and interest. Lowell had a part in the building of this nation, not only in a literary way, but also in diplomacy. But aside from the services of these men to literature and politics, the study of their lives as they lived them in their own communities will serve to make clear a certain side of social history. There are others of our writers whose biographies should be studied in connection with American history. How their literary productions can be used will be illustrated under method.

The current magazines and papers are full of material which can be used in the American history class. Many of them contain letters and diaries of the men engaged in the World War which are real history material. We read the diary of John Adams or the reminiscences of Grant and call it history material; how much more vividly real historical matter are the letters and correspondence appearing during the World War. Just as the documents relating to the Revolutionary War or to the Civil War have been used by historians so will much of that written during the World War become valuable for the historian. Calling attention to this fact alone is of sufficient moment to justify the teacher's use of current magazines and papers, for it will illustrate how letters and documents during times of peace become valuable history material. It is of importance to show how history is written, and the current material has a great value for this purpose.

The teacher will be mindful of the fact that the material used for high school should be far different from that used for American history in the seventh and eighth grades. It ought to be evident that there should be a **progressive** course in American history and that the maturity and ability of the high school pupils will justify some **advance** in this study. Some doubt arises therefore when, for illustration, the colonial period is treated in the high school class in the same manner as it was in the seventh grade, with the exception that not so much time is consumed. Unless there be some real advance made how can the teacher justify this sort of procedure? Under method will be illustrated a type of treatment designed to give added information and develop greater ability. The object is to call attention under material to the necessity of thought on the part of the teacher in selecting material for high school study.

Method — At this point the teacher should re-read what is said on preceding pages about general method in history. What is there said is intended to be applied in a very specific and definite way in American history.

It will be easy as well as interesting, for example, to have pupils apply the critical analysis of historical evidence to the diaries and correspondence appearing in current papers and magazines. All the questions asked in a preceding page in this manual designed to test an author's right to speak on historical matters, might be asked concerning the authors of the diaries, correspondence, etc., in the current magazines and papers. In so applying these tests it should be remembered that mere information is not the end, however valuable that may be, but there should be developed ability in historical criticism, judgment, etc.— in short that historical sense which is so much to be desired.

Indication has been given in preceding pages that high school history differs in material and presentation. This places a distinct and difficult problem before the high school teacher at the very beginning of the year's work. An examination of most high school texts on American history will show that they open with a more or less brief discussion of the period of discovery and exploration and of the colonial period. How shall this material be used? Should the object be a mere brief review of the things learned in the seventh grade? Shall there be the same enumeration of the causes of the search for new lands which resulted in the discovery of America? Shall there be the same enumeration of the discoverers with their discoveries? Shall the pupils again be required to discuss the settlement of each of the various colonies, giving dates and the same facts which were given in the seventh grade? By a comparison of the material on these periods in the text used in the seventh grade with that in the high school text, what real difference in **purpose** is discerned? Are the same facts given in each? Is there a difference in method of treatment? In short, can the teacher discover by this comparison what real gain is intended?

If the teacher of high school history does not teach also the history in the seventh and eighth grades, he ought to examine closely the text used in the grades. Some questions

will naturally arise, the answers to which will be illuminating and guiding.

Suppose that for his own use and information the teacher of American history in high school should desire to settle in his own mind how best to attack the study of the period of discovery and exploration in high school. Some such organization as the following might be used:

Problem: What possible value can there be in the study of the period of discovery and exploration as given in my high school text?

The following steps would likely be taken:

I. Familiarity with the material in the text in high school and the one used in the grades.

II. Comparison of the material found.

III. Reflection on what is probably already known to the high school pupils about this period.

IV. Reflection on the present institutions of our country.

V. Attempts to establish a relation between the material found and our present institutions.

VI. Evaluation of material for showing this relation.

VII. Final selection of a problem or problems designed to involve this relation and material.

VIII. Organization of the problem or problems involving the material in the text, or the material outside of the text **accessible to the pupils.**

In thinking through these steps a number of questions will naturally arise in the mind of the teacher. What, definitely and ultimately, is to be accomplished through the study of American history? What are the institutions of our nation? What is their origin? Have they been the result of rapid or slow growth? Are they different from the institutions of other countries? What are their distinguishing characteristics? What factors have entered into their characteristics? How much is due to the type of people who settled this country? What were their motives, purposes, and ideals? Have the geographical conditions of this country made any great contributions to our institutions? How early was their influence felt? Did the geographical conditions

influence the discoverers and explorers? What, if any, difference would have resulted if some other nation than Spain had discovered America? Did different nations make different contributions to the present institutions of our country?

Such questions lead to a careful scrutiny and evaluation of facts. They will serve to indicate relations, application of facts of history and the line of the best possible procedure. They emphasize the futility and uselessness of merely assigning the period of discovery and exploration for aimless reading and promiscuous questioning. The study of this period ought to make a real contribution to the pupils in the high school. In the endeavor so to teach it, there will come to the teacher some problems the solutions to which will result in a real contribution.

In thinking through the period of discovery and exploration for the high school, the teacher will inevitably conclude that, after all, its greatest importance is found in fixing the **time** and **place** of planting certain institutional ideals. This looks **forward** to the period of the settlement and growth of colonies in America, and is therefore suggestive of **a relation** to what follows. Of course the time is soon settled, but some attention and discussion should be given to the nature of the place as being fit or unfit for the development of such institutions as might be planted. For illustration, the portion of America discovered and explored by Spain had certain geographical conditions, as climate, topography, etc., which were or were not conducive to the ideals which Spain transferred to America. Such a line of study would involve only a superficial study of the existing ideals of the European countries engaged in discovery and exploration, but would involve a comprehensive study of the nature of such portions of America discovered and explored by them. A change in climate, or the possibilities of occupations dependent upon certain natural conditions, are things which are worth considering. The size and direction of the rivers, the location of lakes, the existence and trend of mountains, all are factors in possible disputes and conflicts between the various nations engaged in discovery and exploration, and therefore factors in modifying institutions planted. All these things stated in the form of a problem would be advantageous both to teacher and pupils. The following might be the nature:

Problem: To find out the possible influence of the time and place upon institutional ideals brought to America.

I. Date of important discoveries and explorations.

II. Prominent and outstanding characteristics of European nations involved.

III. Possible geographical influences of portions in America as indicated in

A. Climate.

B. Surface and soil.

C. Rivers and lakes.

D. Existence of harbors.

E. Accessibility to Europe.

IV. Conclusion.

Other main headings might occur to the teacher. Of course both teacher and pupils are expected to enlarge the above divisions by making as many subdivisions as seem proper.

Let it be understood that institutions include all the political, economic, social, religious, and educational. It is only by so including these that any adequate and relatively correct understanding of any people can be obtained.

The pupils should clearly understand what is meant by the institutions of a people. The state and the church with their various and numerous functions and branches of activities are very important institutions of a people. But no less important are the family, lodges and fraternal organizations, schools and the various means of education, industry with its numerous organizations for labor and capital, the newspapers of a people as well as their eleemosynary institutions; all these are included under the head of institutions.

Such a method of handling this period ought not to be beyond the comprehension of the high school pupils nor the ability of the teacher. Unless it be treated in some such way as to indicate a distinct and perfectly evident relation to American institutions and to the growth of American ideals the teacher may well question the value of teaching it at all. As in every other subject so in history those things are the best taught whose relations to our present life are most clearly seen.

The following period, usually called settlement and colonization, should make an even more pronounced contribution to the understanding of our institutions. Let the teacher again guard

against the type of treatment given this period in the grades. Both justice to the high school pupils and pride on the part of the teacher should be sufficient deterrents against such a method. But this is wholly negative; what can be done on the positive and constructive side?

The teacher will quite naturally turn to searching for a problem which will give such notions as above indicated and will follow some such steps in his own thinking as have been given on a preceding page. The following problem might be appropriate:

Problem: What institutions were planted on American soil?

With this in mind it will be found necessary to consider, among others, the following points:

I. Contemporary institutional ideals in European countries.
   A. England.
   B. Spain.
   C. France.
   D. Holland.

II. How these countries attempted to transplant them to America as shown in the study of
   A. Virginia.
   B. Massachusetts.
   C. Maryland.
   D. Pennsylvania.
   E. New York.
   F. French settlements in Ohio and Mississippi valley.
   G. Spanish attempts in the southern and southwestern portions.

III. Apparent successes or failures in these attempts.
   A. (To be filled by pupils.)
   B. (To be filled by pupils.)
   C. (To be filled by pupils.)
   etc., etc.

IV. Summary.

Only such material as will contribute to the solution of the problem will be permitted to be discussed in class. The teacher

should hold his pupils strictly to account for the material which they present.

It will be easily observed that such an undertaking must involve a study of many things. In the first place, conditions in Europe and the predominant ideals must be more than superficially noticed. So far as ideals of government in England are concerned, attention should be given to the struggle against the divine rights of the king and a personal monarch as indicated by the growth of parliament. It was more than the downfall of Charles I. when the executioner performed his duty; it was the downfall of a principle, and the wrath of a people was satisfied only when the man embodying that principle was sacrificed. It was more than a triumph of Oliver Cromwell, the man, when he became the ruler of a people; it was the triumph of the rule of the people. These struggles, though headed by men of great personal influence and power, were only the struggles of a people attempting to establish the right relations between themselves and the government. They were the struggles of a people attempting to analyze and define the rights and privileges of a government as contrasted with those of a people. Recalling that the early colonial history of America is but the history of European expansion in the American continent, it will not be difficult to understand that the conflicts and struggles on European soil were duplicated in part on American soil.

In this connection should be given attention to the means used by the European countries to colonize America. England, for example, had two convenient institutions which were used: one was the proprietary feudal grant and the other was the chartered trading company. It was but natural therefore that the principles underlying such institutions should be transplanted to American soil. Indeed the supporters of feudalism in Europe knew only too well that this kind of institution was doomed in Europe, and therefore necessity demanded its transposition to another land even though unknown and uncertain. In Maryland particularly was an avowed attempt made to establish it and regain its strength and power. How well it succeeded should be noted.

Not enough attention is given to the study of the chartered trading company. Texts on the history of commerce should be used. If not available for pupils, then the teacher should give a proper description and explanation of them to the class. Without

doubt these organizations should be thoroughly understood. Their purposes, their plan of organization, the principle on which their relation to the development of a nation was established, the reason for the **government's** undertaking their regulation, the conditions under which men engaged in their service — all these things have a very distinct bearing on understanding them as institutions and their effect on other institutions. Incidentally, to understand them will soften our criticism and condemnation of English regulation of commercial relations with the colonies. To neglect their study is inexcusable.

It might appear as though this type of study is too much European instead of American, but it should be understood that its purpose is to shed light on American institutions; it carries its own suggestion as to where emphasis should be put. The character of the institutions of any new colony must be determined in part by the motives which induced people to plant the colony, in part by the inherited traditions of those same people, and in part by the nature of the country in which the colony is planted. These three factors should **always** be consciously in the mind of the student of colonial history.

The study of the character and nature of the institutions planted in colonial times will of necessity involve the study of the entire life of the people. The power of the church must be noticed, for thus will be found indications of the **relation** which religion had to civil and political life. Again European history will throw light on this relation. The Reformation had a profound significance for future America. The struggle to subject the ecclesiastical to the lay power was not ended on European soil. The separation of church and state was not completed on the eastern side of the Atlantic. If it were what was the significance of Roger Williams and Anne Hutchinson? Why the founding of Massachusetts Bay colony? Why the dissatisfaction and discontent of so many people of this colony resulting in the migration into what is now Connecticut? Was there any significance in the fact that the leader of this migration was a preacher, Thomas Hooker? Why were such feverish attempts made to send missionaries to the New England and other colonies? These and numerous other questions must be answered in the study of the influence of the church upon American institutions.

The social life of the people indicates much concerning the colonial institutions. Their holidays and their celebrations, their

social parties for both children and adults, their wedding customs and funeral ceremonies, their restrictions of dress — in short all that composes the social life — must reveal clearly their social institutions whose impress may or may not remain in our present time.

The economic life of the colonies must be studied, not for the purpose of gathering facts, but for the purpose of **interpreting** those facts. It should need no argument to show that a knowledge of the history of our economic institutions must give us a clearer conception of our present economic relations. The industrial life of the colonies, their development of manufactures, their attention to agriculture, their commercial growth, must all add to the significance of American institutions.

The schools and colleges of colonial days are evidence of their purposes and ambitions. The education of their children of necessity molded the entire life of the people. What they taught their children directed the thought of the man and woman, and determined what institutions should grow.

Of course it will be quite natural and logical to discuss the apparent successes or failures of those institutions planted in colonial times. These discussions might well **accompany** the discussion of III in the outline of the problem. Whether the institutions lived or died is really of far more value than their mere planting. It is of value to know that along with other notions of political rights came the one of limiting the right of suffrage to those possessing a certain amount of property, but it is of greater value to know that this principle was not accepted by all and that in time it was exchanged for that of manhood suffrage.

The above are merely brief suggestions as to the line of study which will be profitable in finding what institutions were planted in colonial times. Some teachers may prefer to contrast and compare the religious institutions of a number of typical colonies, or the economic life of such colonies, while others prefer to study **all** the institutions of any one colony, going to another on its completion. This must be left to the judgment of the individual teacher. Whatever procedure is followed should not be **aimless** as too frequently happens. There should be such treatment as will clearly be seen to be an **advance** toward explaining the American institutions of our day.

How much time should be devoted to the periods of discovery and exploration, and settlement and colonization, will be deter-

mined by several things. The amount of accessible material determines in part. The clearness with which the teacher sees what is to be done is another important factor. The ability and scholarship of the teacher are considerations. Even with all these things in the greatest profusion, the **relative value** of these periods is the greatest determining factor. It must be remembered that other periods in American history are of far greater value. Perhaps eight lessons might be sufficient to emphasize such things as are desired in the periods to 1754. How much will be accomplished in eight lessons will be largely determined by how well planned and organized these lessons are and with how much vigor and earnestness they are prosecuted. A vague perception of the essentials and a foolish dawdling in recitation will insure the death of any method. Boys and girls should be taught to work in earnest and teachers should drive with equal earnestness toward the goal.

The next great period in American history is that of the struggle between France and England for the possession and control of America. Of course if this struggle is understood merely to be a contest for control and possessions between two nations, it has little value and interest. If it is to be studied merely as a great military event, serious questions might arise as to the value of such a story. But both interest and value attach to the study when it is seen to be a deadly conflict between two sets of ideals fundamentally and radically different. On the one hand there is the Latin ideal with its repressive and suppressive autocratic and monarchic feudal tendencies and beliefs that permeated all institutional life. On the other is the Anglo-Saxon ideal with its inspiring notions of the rights of the people as against those of a monarch, its belief in the worth of the individual man, its tendency to exalt and extend freedom and liberty in all institutional life. High school pupils can understand this difference and will do so if the preceding periods have been properly presented. Very naturally will arise the question, "What was the effect of this great struggle upon American institutions?" Before proceeding with its organization some observations of significant things should be made.

1. The treatment of the English colonies by the mother country differed very greatly from that of France toward her colonies. France was very paternal toward her own colonies, while England, partly because of difficulties at home and partly because

of a fundamental difference in belief in political ideals, was very liberal in permitting such freedom as we now think should have been permitted, but in contrast to that of France it was liberal. The colonies thrown upon their own initiative and resources rose to the responsibility, and in the rising they were necessarily developed. Having enjoyed a little of this freedom, they wondered why more would not be still more enjoyable, and, wondering, straightway began to assume more. Pupils should find evidence of this in the political and religious life of the English colonies, as well as in their industrial, social, and educational life. The pupils should also find evidence of the paternal attitude of France toward her colonies. These tasks are not beyond the high school pupils, though they are sufficiently difficult and challenging to engage their best efforts.

2. Perhaps a good understanding of the effect that the fear of the French on the western and northern sides had upon the English colonies can be secured by noticing the attempts toward forming some sort of union among the colonies. These various attempts, though not altogether successful, left certain developed impressions upon the minds of the colonists. These attempts and impressions can be traced.

3. Attention should be called to the various nationalities existing in the colonies. There were Dutch, Germans, Swedes, English, etc. The existence of these nationalities was not conducive to the formation of a **nation.** There were some indications that these nationalities were gradually fusing. What would be the effect of engaging in a war which would remove a common danger from them? What would be the effect of these nationalities fighting side by side in the ranks of the army? Would there be a better appreciation of the nationalities and colonies for each other? Mutual admiration and appreciation developed among the Allies during the great World War; was a similar effect produced in the struggle between France and England during the years 1754 to 1763? Many things therefore can be seen as influences welding these various races and nationalities into one nation with common aims, common necessities, common ambitions, and common destiny. Searching for these things, tabulating and discussing them will be interesting and profitable work for the pupils.

4. The desire for expansion, originating from whatever cause or causes, was sure to carry the English colonies into a conflict with the French. The very accomplishment of that desire was

of tremendous significance to the English colonies. Crossing the Appalachians gave them visions of greater possibilities. The vast expanse of land which thus came into their possession prophesied additional desires, new necessities with which those desires might be obtained, the development of ideals concerning these new necessities, a dissatisfaction and impatience with those things which tended to suppress their originality and initiative. Without the fear of attack upon their western frontier, without the fear of the stronger and more subtle attacks of ideas and ideals from their French neighbors, the English colonies had an opportunity to expand in their constructive thinking upon the activities and conditions which make American life so attractive and productive.

5. The effect of the struggle for the possession of America by the English upon the industrial life of the colonies must be noted and tabulated by the pupils. Increased desires for the necessities as well as the luxuries of life suggested their production in America. But at once the colonies were confronted with certain very definite and almost traditional English ideas of the function of colonies, and quite naturally the conflict was very provoking. To understand all these forces will necessitate a thorough search for industrial activities. One should also remember that the social life of a people has a very definite relation to and a dependence upon the industrial life.

6. A people remote and isolated from another people have an opportunity and a reason for developing an individuality of their own. Shut in upon the western front by the Appalachians, separated from their home country across the Atlantic, the English colonies were rapidly developing a distinct individuality. A hundred years of such development up to 1754 was not a negligible thing. Crossing the mountains on the west with a great degree of freedom after the defeat of the French, those people were even more remote from England than before. Hence came a greater opportunity for increased development.

7. The spirit of expansion has been a very vital force in American life. The merest and briefest review of the various acquisitions of territory since 1763 carries its own significance. Such a spirit must inevitably leave its impression upon a people so possessing it. Such a people have ever been great, and recognition of this fact will serve to emphasize its importance in human and national development.

8. What battles of this great struggle shall be taught must be determined entirely by how much they influenced the institutional life and ideals of the colonies. In what battle or battles did colonial valor and judgment prove superior to those of the English? How far did such battles give encouragement to the colonial view of their ability to develop without the aid of English government? In what battles were southern and northern troops fighting side by side? In what battles were colonists of different racial or national descent engaged, so that **differences** tended to disappear and **unity** was emphasized? In short, where can be seen the encouragement and growth of **American** spirit and ideals?

With the above observations in mind, and remembering always that others are possible, we might organize our problem as follows:

Problem: What was the effect upon American institutions of the great struggle for the possession of America by the English?

I. Review of the existing conditions of the colonies in reference to
   - A. Geographical boundaries and claims.
   - B. Types of people who had settled.
   - C. Plans for proposed union.
   - D. Industrial activities and trade relations.
   - E. Churches already established.
   - F. Some habits and customs of the people.

II. Why the conflict arose.
   - A. Underlying cause.
   - B. Immediate occasion.

III. How the war was conducted.
   - A. Campaigns and battles.
   - B. By England.
     1. Soldiers furnished.
     2. Expense accumulated.
     3. Leaders in parliament.
   - C. By the colonies.
     1. Soldiers furnished.
     2. Expense accumulated.
     3. Leaders in the colonies.

IV. Evidence of changes being made in colonial thinking and colonial life. (These should be specifically enumerated and tabulated.)

V. Treaty of peace.

VI. Summary of ultimate results.

Let it be repeated again that the above outline is necessarily brief and at best is only suggestive. The teacher may prefer to organize this struggle in an entirely different way or may prefer to have different points discussed. This certainly is always his prerogative. He will always develop this or any other organization so fully in conjunction with the pupils that the work will be very definitely understood and can be done intelligently and with assurance.

Poems often give succinctly ideas which might otherwise escape notice. The teacher may have such at hand for this study. Speeches made in parliament and in the colonial assemblies are enlightening. The possession of such material would most certainly indicate such an organization to include it.

It becomes quite clear at the close of this great struggle that there is pronounced evidence of a growing new nation. How this came into real existence of course is the problem of the period from 1763 to the close of the Revolutionary War. Neither this period nor any other period will be understood if the life of the people **in all its phases** be neglected. Human desires and necessities increase, human thought and action continue with new vigor, human motives and purposes become more difficult of understanding but none the less clearly discerned. Industry expands, intensifies, and assumes a larger and yet larger place. Social, religious and political life becomes more complex and abundant. Institutions of the people come into existence as the demands of the time indicate, and assume the form and nature pertinent to the new country and with less and less concern over those of the lands across the sea. This evidence can be found in the manners and morals of the people; in their attempts to alleviate distress and increase comfort and human happiness; in their efforts to educate their children through schools and churches; in their successes and failures to enact laws, establish customs, and develop a spirit for their maintenance and perpetuity.

As a concrete example of evidence of a new nation with fundamentally different ideas, there might be cited the conflict in the

theory of taxation as held by the colonies and that held by the English government. The study of this particular matter should be undertaken with impartiality and sanity, a combination not always present in the American history class. Pupils should understand that, legally, England had the better of the argument in the matter of taxation. It is not beyond the ability of high school pupils to search for evidence of this and to understand it. Such a view of taxation will inevitably lead to the query of why such a difference in opinion should arise. Efforts to answer this query will reveal the philosophy of taxation and why such a view should be held by a pioneer people. Soon will be reached the general conclusion that a pioneer people are the most democratic of all. The next step will be to discover and understand how this democratic tendency attempts to create and maintain such institutions which will best protect and expand the rights of a democratic people.

Evidence of such institutions can be found in the laws of the assemblies, resolutions and addresses of the conventions of whatever nature, promotion or suppression of industries by the government, relation of church and state, etc., etc.

The beginnings and growth of this democracy in all things will explain the new institutions which arose in the western world. Such beginnings and steps of growth should be definitely pointed out and tabulated. Doing so will test the ability of the class and create a healthy respect for the study of history.

There will be ample opportunity to illustrate how men who become leaders are the embodiment of the social forces which exist in society. It is true that these men may modify these forces taken up and may promote or even retard the development of some of the principles which a large part of society may desire to see perpetuated, but always there is a **social** significance in these leaders which should be understood by the high school pupils. It would be both interesting and profitable, for example, to enumerate the fundamental principles of political and economic philosophy advocated by Samuel Adams, Patrick Henry and George Washington. The social forces of the colonies had been gathering for some time, and it can be easily understood how these two phases, political and economic, were developed by the leaders of the time. Now all this political and economic philosophy must find its fullest realization, so far as its propagation and maintenance were concerned, in regulatory laws, in establishing

certain functions of government, in creating political parties. In doing any or all of these things of course there would necessarily be conflict with existing conditions and institutions; hence the Revolution.

Such a study of the Revolution will **add** to the knowledge already in the possession of the pupils through their study of history in the grades, develop a sane philosophy and a right attitude towards American history, and justify its study as a high school subject. Any other method used in high school which is less pretentious or comprehensive is seriously to be questioned and the burden of proving it justifiable is squarely put upon the teacher.

With the adoption of the constitution the new order of things seemed fairly well established. Anxiously and expectantly a world awaited the results to be achieved by this government with its curious notions and new institutions. Naturally would come to the student of American history the problem of permanently establishing these things with all the trials and difficulties, successes and failures. There was doubt about the ultimate success and permanency of these new institutions, and also concerning the machinery which had been devised for their maintenance.

Shays' Rebellion might be cited as a concrete example of a type of difficulty which this new government must meet. In this episode we discover opposition to the political theory of centralization of power. It is indicative of another opposition, to understand which demands a bit of analysis. It is accepted at the present day that there is such a thing as rights of property. It is not agreed just what the limitations of these rights are, nor was it in the early days of this republic. There are now, and always have been, two classes of property holders; holders of real property and holders of personal property.

So far as the early days of the republic are concerned, the holders of real property were divided into three groups: (1) The small farmers, particularly those far inland from the seacoast, and consequently with certain notions arising from their particular location; (2) the holders of large estates as illustrated by those found along the Hudson River, and inheriting certain feudal and manorial ideas; (3) the slaveholding planters of the South. Shays represented the first class, the small farmers, who were really the debtor class. The opposition of Shays, therefore, was the opposition of the debtor class to the existing taxation

scheme, with their counter proposition of advocating paper money. Studied in this light, Shays' Rebellion is full of significance.

The Whisky Rebellion is another example of somewhat the same type of difficulty which confronted the new government. Like Shays' Rebellion it should be studied in the light of **relation.**

In a preceding page attention has been called to the fact that a pioneer people are extremely democratic. This fact can be traced further in the life of the people who pushed the frontier westward. In Kentucky, Ohio, Indiana, and the whole of the Northwest Territory this is well illustrated. In due time in all of these states can be seen a conflict in ideals and institutions between these states, known at one time as the West, and those states generally known as the East. This conflict is easily seen in the movement which culminated in the election of Jackson. All the stages should be carefully studied and definitely understood. Thus will result a higher appreciation of the **manner** in which institutions develop and the great **struggles** which have been necessary. Their great cost will lead to a higher value placed upon them.

Of course it must be kept in mind that the frontier is not a stationary thing but an ever-moving zone. Thus will the study of the West furnish additional interest and value in understanding our present institutions.

To the teacher who sees the possibilities of such a method it is a question not of the **lack** of material, but rather of **selection** out of an abundance of it. Thus will American history be seen to be a continuity and a developing process.

Without continuing to enumerate, it is quite evident that the study of institutional growth will furnish a problem of sufficient magnitude and scope for the work in high school. Not that its study will be **wholly neglected** in the grades, but that in the high school its study takes on a **deeper meaning** and a more **complex** aspect.

There will always be a place for problems in American history. Even though the large problem is the understanding of institutions of our present day, that quite naturally can be accomplished by the study of a series of smaller ones, in which must necessarily occur events and questions of the day. To study American history without such reference certainly will miss the mark. Current events of historical significance can best be

studied in connection with problems properly organized. Those who are unable so to organize to include current events should refer to the topic current events under English.

Enough has been indicated to show that the best results can be obtained if a problem is raised whose solution will involve a discussion of some entire period in history. Unless the teacher understands that there **are** real problems running through a series of years, the development of which is now accelerated, now retarded, now modified, and that it is the business of history to discuss these as such, no real vision of how history should be taught can be possible. Teachers may as well admit this fact.

To study the Kansas-Nebraska Bill as an isolated thing, unrelated and unconnected, is to miss the real understanding of this measure. To discuss the Compromise of 1850, the Missouri Compromise, the Wilmot Proviso, all as though each was an independent event and measure, is certain to guarantee failure in knowing the significance of each. All certainly are phases of the slavery struggle, which struggle in its turn has an economic phase and importance. The opening and development of the West could not possibly have been accomplished without raising many problems, among which slavery was only one. There immediately arose in this connection the question of railroads as a means both of communication and transportation. It ought to be clear that the problem of transportation raised the question of the **location** of such routes. Not only where should be the routes, but also where should be the terminals of such routes. It was only natural that the routes and location of terminals would mean increased development and land values of certain places. This brought a long train of consequences and quite naturally their discussion was carried on in the halls of state legislatures and also of congress. It ought to be evident therefore that all the above topics are related, and should be so taught that the **pupils will see this relation.**

Now if the teacher thinks in **terms of relation,** problems in abundance will be suggested. The organization of these problems will demand both scholarship and skill in order that they be of sufficient scope and magnitude as well as of good proportion and development.

For those teachers who do not quite see how to raise problems involving entire periods of history and the material in the text as well as collateral reading; or for those who desire smaller

units for classes which have not had much training in the study of history in the form of problems, some concrete illustrations of small problems are given. But it must always be remembered that any problem organized on paper is not wholly and completely suggestive of the proper procedure for the reason that there must necessarily be lacking the personal element of the teacher, the many questions which are asked by the teacher in the **development** of the organization, and the questions and discussion of both teacher and pupils in conducting the **recitation** — in short many of those things which can be exemplified only by teaching an actual lesson. However, to the teacher who understands thoroughly what constitutes a good inductive lesson, who knows just when and how to use deduction, who sees all the essentials of a good pedagogical recitation, such problems will be of very great assistance. Such a teacher will be able to take them in their cold printed form and make them real, living, and interesting actualities to the class. Those who understand less of pedagogy and of history must content themselves with methods and results less worthy.

In order to assist those teachers who really have difficulty in proposing large problems involving entire periods, the following might be of service for smaller units. It will be noticed that different types are illustrated.

Problem: How did the nation solve the problem of Reconstruction?

I. Problems confronting the nation at the time.
   A. Conditions in the South after the war.
      1. Political.
         a. Substitution of military government for civil.
         b. Election of negro legislators.
         c. Local government in the hands of negroes and Northern whites.
         d. Means taken to suppress negroes — example of the Ku-Klux Klan.
      2. Economic and industrial.
         a. Bad state of finances.
         b. Loss of industry.
         c. Lack of good laborers.
         d. Vagrancy laws.

3. Educational.
   a. Loss of schools and colleges and their means of support.
   b. Contrast of educational conditions before the war and after.
   c. Literary conditions before the war contrasted with those after the war.
   d. Efforts made in reconstructing educational affairs after the war.
   e. Growth of negro and white schools.
4. Social.
   a. Natural antagonism between whites and negroes.
   b. Discrimination against negroes in freedom of speech, assembling, etc.
   c. Occasions and examples of social distinctions, customs, etc., etc.

Note — Reference should be made to Cable's Old Creole Days, Page's The Old South, etc.

B. Attitude of political leaders.
   1. Northern.
      a. Charles Sumner.
      b. William H. Seward.
      c. Thaddeus Stevens.
      d. Horace Greeley.
      etc., etc.
   2. Southern.
      a. Alexander Stephens.
      b. Robert Toombs.
      etc., etc.

II. Proposed plans of Reconstruction.
   A. Lincoln's plan.
   B. Johnson's plan.
   C. Congressional plan.

Note—Each of these plans must be given and developed in detail. Guard against generalizations.

III. Conclusion.

Note the opportunities for biography and much concrete material — illustrative material from source books, of vagrancy laws, conditions of labor, riots, conduct of elections, etc., etc. These are only a few of the possibilities for the teacher. Others may suggest themselves.

Problem: Why did Lincoln issue the Emancipation Proclamation?

I. Content of the Proclamation itself.

II. Lincoln's own views on freeing slaves.

A. Stone-Lincoln resolutions in Illinois legislature. Nicolay, p. 47.

B. Compensation for emancipated slaves.

1. Presented plan before thirtieth Congress. Nicolay, p. 86.
2. As president he proposed to pay Delaware. Nicolay, pp. 322-323.
3. Proposed compensation to Southern delegates. Nicolay, pp. 329-331.

C. Opposed to repeal of Missouri Compromise in 1854 by Kansas-Nebraska Bill. Nicolay, pp. 96-97.

D. Opposed Fremont's proclamation freeing slaves. Nicolay, pp. 236-237.

E. Lincoln-Douglas debates.

F. Speeches on journey from Springfield to Washington.

G. First inaugural address promised protection.

H. Lincoln's answer to Greeley's "open letter" shows indifference to slavery. Nicolay, pp. 336-337.

I. Anecdotes illustrating.

III. Was the time opportune?

A. Conditions at home.

1. Northern dissension indicated by
   a. Election of 1862.
   b. Holmes' "Brother Jonathan's Lament for Sister Caroline."

2. Possibility of causing border states to secede — name them.
3. Progress of the war thus far.
   a. Specify battles and results.
   b. Read Steadman's poem, "Wanted — A Man," written September 8, 1862.

B. Foreign considerations.

1. England's attitude.
   a. Cotton industry.
   b. England had previously abolished slave trade and freed slaves.
   c. Early recognition of Southern Confederacy.
2. Proclamation changed from war for union to war for destruction of slavery. Nations thus compelled to await **this** outcome.
3. Attitude of other foreign nations, notably France.
4. Diplomatic battles — connect with those of today.

IV. Conclusion.

References

Nicolay — A Short Life of Abraham Lincoln —Century Co.

Lothrop — William H. Seward; American Statesmen Series — Houghton Mifflin & Co.

Bancroft — Life of Seward, two volumes — Harper Bros.

Wilson — Division and Reunion — Longmans, Green & Co.

Not enough use is made of literature in the study and teaching of American history. Certainly to some extent the philosophy, ideals, the spirit and thinking of a people are reflected in their literature. Most people will agree that there is some connection between literature and life. The teacher of history ought to welcome every opportunity to give a true and interesting account of life.

In the Manual and Course of Study for the Elementary Schools, pages 93-94, will be found a list of poems which can be used to advantage in the history in the seventh and eighth grades. The high school teacher of American history should be thoroughly conversant with all the poems there mentioned, and many more, and should also know to what extent they have been used in the grades. Indeed for illustrative purposes some of

them might be used over again even if used in the grades. The literature is so abundant however that this might not be wise or economical. A few illustrations of their use might be of assistance.

Suppose the class is investigating the manner and means of slaves escaping from their masters. Of course it was well known that the people of the Northern states often assisted the slaves to escape. The South bitterly complained of this treatment and again and again their governors communicated with those of the Northern states in an attempt to secure laws against this assistance. The Southern states had laws severely punishing those who undertook to help slaves escape. Sometimes they punished innocent parties, for it must be remembered that the slaves themselves were anxious to escape, and their plans often involved innocent people. But it must be admitted that even more often the punishment fell upon guilty parties.

Whittier has embodied a tribute to one such slave stealer in his poem entitled The Branded Hand. McMaster has given the historical incident on which the poem is based in Vol. VII, page 253. It would appear that one Jonathan Walker, a sea captain from Massachusetts, went to Florida to build a railroad. The employment of slaves in the construction of this road was quite natural and logical. It was equally natural and logical for these slaves to persuade Walker, being a sea captain, to assist them in escaping to a port in the British West Indies. Walker agreed, but unfortunately just after rounding the Florida capes he fell ill, and in the confusion which resulted his drifting vessel was overhauled by the crew of a wrecking schooner. Walker was taken back to Key West, and on being sent in chains to Pensacola was convicted under the Florida laws of slave stealing. His punishment was the branding of the letters S. S. (Slave Stealer) on his right hand, and the payment of as many fines as there were slaves on the boat, or to be imprisoned until the fines were paid. After eleven months of imprisonment, chained by the foot, his friends raised enough money to pay the fines and he was freed.

Burning with indignation and glowing with a firm faith in the ultimate triumph of the freedom of all mankind in spirit and body, and anxious to contribute to this end by pleading the cause of the slave, Whittier wrote the poem radiating matchless enthusiasm and inspiration.

Welcome home again, brave seaman! with thy thoughtful brow
and gray;
And the old heroic spirit of our earlier, better day;
With that front of calm endurance, on whose steady nerve in vain
Pressed the iron of the prison, smote the fiery shafts of pain!

But Whittier draws a high lesson from this incident and calls attention to the sacredness of man:

In thy lone and long night-watches, sky above and wave below,
Thou didst learn a higher wisdom than the babbling schoolmen
know;
God's stars and silence taught thee, as His angels only can,
That the one sole sacred thing beneath the cope of Heaven is
Man!

Whittier is sure that God's laws cannot be violated with impunity and he warns them who so attempt:

But woe to him who crushes the soul with chain and rod,
And herds with lower natures the awful form of God!

The branded hand of Walker will certainly become a strong challenge to all free men to rally and purge the nation of the evil of slavery:

And the master of the slave-land shall tremble at that sign,
When it points its finger Southward along the Puritan line;
Can the craft of State avail them! Can a Christless church
withstand,
In the van of freedom's onset, the coming of that hand?

Surely this poem read as an illustration of the strong feeling which was aroused by the Southern states in their anxiety to preserve their institution will do much to vivify the study of one phase of the slavery question. Is not the historical incident on which the poem is founded made a little more real? Then, too, as a factor in arousing feeling against the practices of the Southern states in their defense of their institution, as well as against the very institution which gave rise to these practices, who shall say it is less potent than some of the speeches of Webster or of Wendell Phillips? Is the former any less historical material than the latter?

If one is studying the social life of the South, one phase of it can be illuminated by the use of such a book as Cable's Old Creole Days. As its name indicates, this book contains several short stories which reveal the place of the Creole in Southern history. In any and all of the stories in the book there is indicated the social life of this people, with their own loves and hates, their own romances and sorrows, and the social position of the Creole in Southern society. Through marriage was produced the quadroon, beautiful, charming, dangerous, loved, and hated. Many a beautiful girl's life was completely ruined and wrecked through the discovery of her parentage, so relentless was Nemesis in the pursuit of her victim. The language of these Creoles and quadroons, their homes, their lives, their traits of character, their strength, and their weakness are all clearly revealed in the stories which Cable wrote. The social problems with which the South had to deal are clearly suggested rather than completely enumerated and described. Reading chapter IV in Vol. I of Rhodes' History of the United States will mean so much more when these stories of Cable are also known.

The possession of some such work as Manly's Southern Literature (published by B. F. Johnson Publishing Co., Richmond, Va.), which gives in a small volume selections of the best writers of the South, will do much to give a proper understanding of Southern history in its varied aspects. In these selections are portrayed the culture and refinement of the Southern gentleman and sometimes also his pride and haughtiness.

In Louisa Susannah M'Cord's Woman's Duty is given a good understanding of a Southern woman's notion of woman's suffrage. Here we are told that woman "has no need to make her influence felt by a stump speech, or a vote at the polls; she has no need for the exercise of her intellect (and woman, we grant, may have a great, a longing, a hungering intellect, equal to man's) to be gratified with a seat in Congress, or a scuffle for the ambiguous honour of the Presidency." The whole philosophy seems to be epitomized in the following paragraph:

"Even at her own fire-side, may she find duties enough, cares enough, troubles enough, thought enough, wisdom enough, to fit a martyr for the stake, a philosopher for life, or a saint for heaven."

It would appear without argument that this has a historical value in explaining a certain phase of Southern society. Perhaps,

too, it may serve to suggest an explanation of the extreme loyalty of the Southern woman to the Southern cause and the devotion with which she performed her task in the dark days of the Civil War.

If the topic of Southern education is under discussion, one phase of it might be illustrated by reading William Tappan Thompson's Major Jones's Courtship. The scene is laid in Georgia, to which state he removed in 1835 from Ravenna, Ohio, having the distinction of being the first white child born in the Western Reserve. The Southern humor is nicely portrayed and there is a wholesome lot of good fun in it. It is well to have pupils secure an understanding of this point, for it will tend to bring out the realization that Southern people were human beings.

An idea of one type of Southern poetry is well illustrated in Richard Henry Wilde's poem, My Life Is Like the Summer Rose. It is quite sentimental and yet suggests deep and sincere emotions. Such a poem does much to suggest the value and merit of Southern literature, and to dispel the commonly mistaken notion that the South was deficient in educational facilities before the Civil War.

MY LIFE IS LIKE THE SUMMER ROSE

My life is like the summer rose,
  That opens to the morning sky,
And ere the shades of evening close,
  Is scattered on the ground to die;
Yet on that rose's humble bed
The sweetest dews of night are shed,
As though she wept such waste to see;
But none shall weep a tear for me!

My life is like the autumn leaf
  Which trembles in the moon's pale ray,
Its hold is frail, its date is brief,
  Restless, and soon to pass away;
Yet when that leaf shall fall and fade,
The parent tree will mourn its shade,
The wind bewail the leafless tree;
But none shall breathe a sigh for me!

My life is like the prints which feet
  Have left on Tampa's desert strand,

Soon as the rising tide shall beat
  Their trace will vanish from the sand;
Yet still as grieving to efface
All vestige of the human race,
On that lone shore loud moans the sea;
But none, alas! shall mourn for me!

These illustrations of the use of literature in the American history class surely reveal a vast wealth of material which can be easily obtained by any teacher who really desires it. Nor need these things be lugged in, as it were, for if the organization of the teacher's problems is properly made they become a real vital portion of the work. Of course it is presumed that the scholarship of the high school teacher is sufficient to discover these literary selections. If it is not, then there is a strong suggestion of the need of acquiring it.

Quite a great deal is said frequently about the study of local and state history. It needs no argument to prove its worth. However, too frequently its proper worth is not well understood. In the first place, always the teacher of American history must guard against provincialism and the development of too narrow a view which would result in sectionalism. Those who are the most enthusiastic for state history are not always careful in placing its proper value. It is only by having a proper perspective in this matter that the best results will be obtained. Let it be clearly understood that it has a value; the teacher's task is to determine its value.

In the second place it should be clearly kept in mind that the history of Ohio is not a thing separate and apart from the history of the United States. It could not be, for the state itself is an integral part of the United States and its history is the story of one portion of the development of our country. The building of the canals of Ohio, for example, is not a thing that concerns Ohio alone and a completely false impression will have been given if it is so taught. The real student of the history of the United States knows full well that the project was discussed as a national one, and certainly in a political sense it was of even greater concern to the New England states than to Ohio itself. The development of the canals of Ohio was not an isolated thing; other states, Indiana for example, were planning for these inland waterways at the same time. Was this an accident or

was there a national purpose? In the same way the sale of public lands in Ohio was not a state affair only; there were national regulation and national supervision and national concern. To teach it otherwise is to give false impressions. The teacher's business will be to discover what were the national issues, the national problems, and the national concerns with which state developments were connected. Such things can be seen not by confining the search to the state, but by expanding it to the nation. Failure to see relations between state development and national is failure to understand clearly. The pupils have a right to know not only things that are true but also their true relations. If local and state history be so taught in the American history class then can unqualified approval be given; otherwise doubts will exist as to the value of any results obtained.

In all that has been suggested under method there has been present the purpose to build on sound principles. The teacher who sees only the concrete illustrations given, and, having used them, awaits for some one to present others before being able to proceed, has failed to see the essentials. Such a teacher should read and study again what is here said in the hope that the theory and principles will be discovered.

References

Mace — Method in History — Rand.
Wayland — How to Teach American History — Macmillan.

CIVICS

Aim — Civics is another branch of the social sciences which has for its aim the making of better citizens, particularly in their relations to their government, local, state, and national. It is quite evident that there is an overlapping of American history and civics. Yet it is also evident that there are phases of governmental relations not adequately covered by American history and which are quite essential to the safety and security of a nation.

In order that the aim of civics shall be attained it is well to enumerate some very specific things to be accomplished:

1. To perceive clearly the function and purpose of government.
2. To gain a clear and detailed understanding of the operation of local, state, and national government.
3. To conceive the rights and privileges of citizens.
4. To have a proper conception of the duties and responsibilities of citizenship.
5. To understand the growth and development of the powers and duties of government.
6. To develop a proper ethics of government.
7. To give training in seeing the problems confronting a government.

It is quite essential that the teacher shall understand that there is a distinction between civics and political science. The failure to observe this distinction has been responsible for much of the dry abstract and theoretical teaching of civics in the high school. It were far better to leave to the college the instruction in political science, where the students, because of their maturity and training, are better able to understand the real **science** of government. It is sufficiently ambitious for the teacher in high school to attempt to give an intimate understanding of the practical side of government, to establish right motives, attitudes, and ideals. Or, stating it a little differently, the instruction in the high school should be historical and practical, leaving the college to instruct in the abstract and philosophical.

Material — The aims given above make it clear that there is a certain body of material which belongs equally well to American history and civics. Indeed it may also belong to economics. This is illustrated by the topic tariff, which is discussed in texts on American history, civics, and economics. It is not the intention to make any academic distinction of such subject matter, but rather to indicate certain material which can be used effectively in the civics class. The following will be suggestive:

1. The text on civics.
2. The text on American history.
3. The proceedings of boards or legislative bodies as the city council, trustees of the township, the board of health, the county commissioners, the state legislature, the congress of the United States.
4. News items, magazine articles, etc.
5. Reports made by county, state, and national officers.
6. Actual observations by the class of various boards, the courts, etc.
7. Talks given by bankers, insurance agents, local officers, etc.

In few subjects is there greater opportunity to connect with everyday affairs than is found in civics. Consequently the alert teacher will secure as much material as the limits of time and energy permit from the real live world outside of the school room. To the teacher who knows how, the text is merely the point of departure. Or, changing the figure, it merely serves as a guide in the seeming confused mass of material accessible to the school.

Method — A glance at the specific aims suggested indicates clearly that a vast deal of civics not only may be taught in connection with the text on American history but should be so taught. The sooner teachers in the high schools become conscious that the various special subjects there taught are for the use of the boys and girls and not the boys and girls for the use of teaching the special branches, the more efficient and the happier will all concerned be. This attitude will go far toward relieving the feeling that any special branch is being neglected because it happens to be used in connection with the study of some

other branch. To find the place where the subject matter will best fit the lives of the pupils should be of greater concern than trying to find the place where the pupils will fit into the subject matter at any particular time in the high school course. The development of the pupils is worth very much more than the development of the subject. The teacher therefore needs not only to be a student and scholar in his particular subject, but also a student and scholar in psychology, so that the needs of the pupils will suggest the proper adjustment and adaptation of subject matter. If he is less a student in the one than in the other certain failure will follow.

A few examples will make clear the suggestion of connecting and relating subject matter. Certainly no argument is needed to show that the tariff is such a topic as is discussed in any text on American history as well as any text on civics. Indeed to go farther, it is also a topic in economics. Observation will show that much of the material on tariff in the civics text is quite identical with the material on the same topic in the text on American history. It would not always be apparent to the observer whether a recitation on this topic was one in history or civics. And perhaps, so far as high school pupils are concerned, it matters very little whether it is civics, American history, or economics. Of course there is the **historical** aspect of tariff as well as the **civic** aspect in its place as a function of government and its **economic** aspect as to its value as an economic policy. But all three are discussed and of right ought to be discussed in the class in American history. Common sense ought to indicate therefore the advisability of using the text on civics and on economics when that topic appears in American history. Not only is it not detrimental so to use such material, but it is a distinct pedagogical gain as well as a gain in economy of time. It ought to be evident that the theoretical discussion of the topic will become much clearer when it is illustrated by actual concrete cases taken from the history of our country. If the topic of tariff is exhaustively discussed **when** it is discussed, it can be omitted when it is reached in both of the other texts. This does not mean the omission of the material in either of the texts, but the **use** of all of it in all three texts.

The labor problem is another topic discussed in American history, civics, and economics. The historical discussion concerns itself with the causes which gave rise to it, its growth and devel-

opment, its practical effect on the history of our country. Its discussion in civics will reveal its actual and theoretical relation to government, while economics undertakes to determine the principles underlying the proper policy in the economy of a nation's welfare, in its social and industrial significance. But who shall say that the discussion in history will preclude or ought to preclude either or both of the other phases? It is merely academic and pedantic to say that the economic or civic relation of the labor problem should be excluded from the history class in high school. It should be repeated that the high school teacher should be more concerned with providing proper equipment for the boys and girls as real citizens than for mere academic scholars.

The discussion of the growth of local government and the development of local institutions certainly connects itself with American history. If the teacher has clearly in mind that our own present local government can be traced directly to the origin and development of local government in the colonial days, then both American history and civics have an added interest and significance. It needs no argument to show that the county as a political unit can easily be connected with the growth of Virginia as a colony, and that it can easily be shown to be a southern institution. The township connects itself with the history of Massachusetts, and to say that the development of our present municipal government is of New England origin is merely to mention the quite apparent.

If the teacher of American history is conscious of these relations of local government as given in history and civics, it will need only the least ingenuity in seeing how they can be taught in their proper relations. When they are not so taught there quite naturally arises the suspicion that their relations are not clearly seen. To believe these subjects can be so taught but not to act on the belief creates a curious situation indeed.

The study of local government and institutions gives rise to the query as to the limitations of local, state, and national government. This query becomes the subject of special study in civics, but just why such study should be deferred until the text in civics is begun is quite difficult to understand. Certainly throughout the history of this country there are concrete cases showing the conflict of opinion as to the exact limitations of each. The whole doctrine of state rights is at once suggested. It would be difficult to determine whether this question belongs more to

American history than civics. Without attempting to determine it, there seems ample reason for using the material in the texts on American history and civics to secure a proper understanding of the whole question.

The teacher will be able to secure plenty of concrete cases of the conflict in opinion on this question. Very early in the history of our nation this conflict can be seen. The passing of the Virginia and Kentucky resolutions by these two states respectively as early as 1798 gave good indication that centralization of power and authority in the national government would be bitterly opposed.

The trouble arising between the Creek Indians and the state of Georgia was finally settled by the supreme court against Georgia. But Georgia seemingly was unconcerned over the decision and clung tenaciously to the doctrine of state rights. The duty of enforcing the decision of the supreme court devolved upon the president of the United States, who at that time was Andrew Jackson. But Jackson was by no means a strong believer in centralized government, inconsistent though he was in his acts and in his professed belief. He therefore somewhat irritably, though facetiously, declared that since John Marshall had made his decision he should enforce it if he could. Does this episode belong more to history than to civics?

The principles laid down in the Hartford convention in 1814 as a result of the antagonism of the New England states against the war surely indicate a conflict of opinion over this very question.

It is interesting to recall that Ohio has contributed her share to the history of this same doctrine of state rights. The legislature passed a law to take effect September 15, 1819, laying a tax of $50,000 on each of the two branches of the United States Bank located at Cincinnati and Chillicothe. When these branches refused to pay the taxes, claiming no authority existed for the state's action, the sheriff seized $98,000 in money. The case was carried to the supreme court of the United States, where John Marshall again delivered the opinion denying the right of the state to levy such a tax and upholding again a strong central national government.

These examples will suffice to show that the limitations of authority as between the state and nation are not always clearly

defined. Many examples of more recent date can be found by the teacher and pupils.

These examples also clearly show that it is by no means easy to distinguish between that material which belongs to history alone and that which belongs to civics. Happily the high school teacher does not find it incumbent to decide.

The story of the origin and development of the constitution of the United States is a part of both American history and civics. Indeed, judging from the amount of space given to its discussion, it would seem that the authors of the texts in civics and those of the texts in American history are quite convinced that it belongs to the special field of each of them. So far as the high school teacher is concerned, such a seeming claim is entirely sufficient to indicate its relation and the necessity of studying the story of the constitution of the United States by using both the text in American history and that in civics together. A careful tabulation of the number of pages in the text in civics devoted to a study of the constitution of the United States will show the tremendous saving of time by such a related study and with not only no loss to the study of civics but with a positive gain to it.

It is not necessary to multiply examples of how civics and American history can be taught together. Perhaps enough has been given to show that the **principle** is sound, and that an alert teacher can not only save time but add zest and interest and efficiency to the work.

However, when all has been done that seems possible to be done in this connection there will probably remain a certain body of material which can best be studied as civics alone, and in addition there may be much material to which a greater civic **emphasis** should be given than it is possible to give in connection with the study of history. To this end it will be found desirable to devote a portion of the year to such study alone. Perhaps it would not be far amiss to say that three months given intensively to such a study will be found sufficient.

Ample time should be devoted to the study and discussion of those special things which bear directly on developing an intelligent voter. The system of voting, what the ballot contains, questions upon which the people have a right to vote, initiative and referendum, qualifications for a voter of Ohio, and the locality,— all these are proper topics for detailed study.

It ought not to be necessary to say that their study should not be undertaken in any perfunctory or abstract manner. Familiarity should be gained by a concrete study. Sample ballots can be secured and an election can be conducted in the class room, with all the necessary machinery. What the necessary machinery is can be somewhat developed inductively. The **needs** of an election can thus be determined and a **judgment** can be given as to whether we have too much or too little or too inadequate machinery. Not merely a knowledge but **a working** knowledge is desired. Such a procedure will give it.

The legislative function of a locality should be given attention. This will best be done by beginning with the town council, or the township trustees or the local board of education, and extending to the proceedings of the county commissioners. The function of the board of health should be discussed, as well as the necessary machinery to enable it to perform its function properly.

Here again such study will best be conducted by actual observation if possible. Numerous natural questions will thus be answered and a clearer understanding will be secured. At least the records of these legislative bodies can be studied at first hand, and often their clerks will be glad to come before the class and discuss their particular work. The class may also be organized into these various bodies and proceed with some matters of business pertinent to their work.

The judicial machinery should be understood. There is the local justice of the peace with his constable, there is the mayor of the village and the courts of the county. All these can be easily understood by the pupils of the high schools **if** they are clearly understood by the teacher.

It ought to be definitely understood that instructions in civics must not cease with community civics. It certainly will include community civics. But to stop with this kind of civics is to shorten the vision of boys and girls as to their whole duty and responsibilities. They should see that they are citizens of the nation as well as of the community and the state. To see less than this is to foster narrow sectionalism at the expense of national feeling.

There will also be a body of material which concerns the individual not only as a voter but also as a citizen. Such material will need ample time for discussion and application. It is necessary to know not only for **what** and for **whom** to vote, but every

good citizen should have a judgment on the number and kinds of offices which are really necessary for a well conducted government. The mere existence of an office is not of itself sufficient evidence of its merit or necessity. Conversely the lack of the existence of an office is not of itself sufficient evidence of the lack of necessity for it. These things are fit subjects for instruction in the high school and the pupils should be trained in developing sound conclusions and good judgment relative to them. In short, the **function** of government should determine whether there should be an increase or reduction in the number of government offices. This of course suggests that the needs of a community and a nation should be carefully examined and determined.

Then, too, the importance of creating proper public sentiment on public issues should not be overlooked by the schools. This does not mean that the schools should ever engage in a controversy or discussion and debate merely mooted questions, but it does mean that the merits of various public issues might be enumerated and tabulated. To present public issues unbiased and without prejudice demands skill indeed on the part of the teacher. To train the pupils so to present them demands even more skill, but its difficulty should not prevent its accomplishment. We need more citizens with judicial minds and a greater degree of fairness; the public schools must train the pupils so that they will be able to give sound judgment, not only while they are pupils in the high school, but also when they become adults with the responsibilities of adults.

In all that has been suggested in method there has ever been present the thought of making the study of civics practical. The principle of self-activity of the pupil should not be omitted and every possible opportunity should be given to **practice** the duties and rights of citizenship.

To the end that pupils may practice the rights and duties of citizenship and to the end that the best understanding of the relation of the individual to the government may be secured, it is highly essential that they be taught to perform such duties as are pertinent to them as minors. Many, very many things not only **may** be done by them but **should** be done by them. School campaigns for the improvement of local sanitary conditions, movements for the moral uplift of the civic community, the various activities in which pupils may engage as a result of the calls of the government, local, state or national, should be wel-

comed by both pupils and teachers; by pupils because of the opportunity to serve and understand; by teachers because of the opportunity to permit school work to function in actual life. Teachers should be anxious in their search for such opportunities.

The development of good citizenship, the establishment of right ideals and attitudes towards the government, is one of the most important duties which confront the public schools. Civic righteousness can not be safely neglected. To do so is to imperil the nation. The teacher of civics has a heavy responsibility. Earnest and sincere loyalty will suggest proper ways and means of discharging this responsibility.

ECONOMICS

Aim — Economics is a third branch of the social sciences which has been pressing for serious study in the high school. The study of social science in our high schools has been steadily growing in importance and elaboration. History and civics have had well established places in the curriculum of the high school for some years. Gradually the study of economics in the high school is finding its place also. The tremendous importance attached to the study of social science in our schools is full of significance, meaning and hope, both for the school people and citizenship of our country. It is well therefore to analyze what is expected to be accomplished by each branch of it.

The enumeration of the following things to be kept in mind by both the teacher and pupils will serve to clarify its purposes and make its study more efficient:

1. To establish right ethical ideals in the industrial world.
2. To understand the principles underlying the economic questions of the day.
3. To give training in analyzing economic phenomena.
4. To gain a knowledge of the importance of economic principles in the economy of a nation's welfare.
5. To form a right conception of the relation of the various economic factors (for example, between labor and capital; between production and distribution, etc.).
6. To gain insight into the possibilities of improving and promoting a people's economic conditions.
7. To develop a capacity and skill for building intelligently, and therefore securely, the economic structure for present and future prosperity and happiness.

Reflection will show that many of the questions of the day which are insisting upon being answered are economic in their essentials. How can such questions be answered safely and intelligently unless serious thought is given to them? To undertake to regulate prices by legislation, to turn the discontent of the poorly paid workers into contentment, to establish

rules and regulations for the operation of railroads and coal mines, to legislate on taxation and currency, may be to make discontent more rife, injustice more pronounced, and the whole economic structure unstable, unless at the same time there be some assurance and certainty that all of our attempts are confidently corrective and reasonably remedial. While it is true that not even every voter will be called upon to express by his ballot his notions and ideals regarding these questions, but will leave it to his representative in the state legislature or national congress, yet it is no less true that every voter ought to be sufficiently well informed to know whether the views of his representative are sound, and every voter should be strong enough in intelligence to recognize true leadership. Daily the economic questions which must be answered by legislators are increasing in number and importance. The masses of the American people may not always know what the true answers are, but it surely is not too much to expect them to understand these answers **when** they are given by their leaders. But such understanding will come only with study and care.

The schools ought to recognize that the conditions of life are growing more complex every day. Nor will they ever again be as simple as they once were. That day has passed never to return. Free lands are gone and with them went many of the possibilities of one's alleviating and bettering his economic conditions by merely migrating. Labor is less mobile than formerly, if not altogether from choice then from necessity. But desires have increased and with their increase have not always come the means of their satisfaction. The increase of population has been accompanied with greater struggles for satisfactory existence. All these things and numerous others have contributed to the complexity of life. It is right and proper that the schools assist in increasing man's knowledge and intelligence so that he may not be a creature bewildered and confused in his complex environment. The happiness of the human race if not its security should be sufficient plea for the assistance of the schools.

In the teaching of economics there is some tendency at times to believe that the subject speaks the last word on many of our economic difficulties and gives a final and ultimate solution. If this were really true it would need no argument to prove the importance of its place in the curriculum. However, a serious student of economics knows that such is not the case. If eco-

nomics serves to awaken study and reflection on the **possibility** of the solution of our economic problems, it will have done a splendid thing. If it is properly presented there certainly will result some information and enlightenment. But after all perhaps it is well to understand that economics serves best as a starting point and not the goal; it is a means and not an end; it is a guide post rather than a hitching post.

Material — Some suggestions as to the material for instruction in economics can be gained from a reference to the aim of such study. The infancy of the subject itself and the nature of the problems with which it deals point to the propriety as well as the necessity of using current material in connection with the text. Reflection on the aim of economics will repay in suggesting material, but a few sources might be indicated:

1. The adopted text on economics.
2. Collateral reading in other texts. (Great care should be exercised in making such assignments. It is easy to make the collateral reading too heavy and confused.)
3. The text on commercial geography.
4. Texts on American history and also on industrial history.
5. Articles selected from magazines and newspapers.
6. Material secured from local industries (for example, agriculture or manufacture).
7. Information secured from the study of public utilities.
8. Proceedings and activities of local co-operative organizations.
9. Transportation routes, including railroads and public highways.
10. Platforms of the political parties which refer to economic questions.
11. Messages of the governor and of the president relative to finance, taxation, etc.

It is impossible to indicate all the sources of material for the study of such a current subject. As the primary teacher who makes so much use of oral instruction must have an abundance of material which is of direct interest to the primary pupils, so must the teacher of economics expect to absorb an

immense amount of information about things which are of public concern in the economic life of our people, and be apt and adept in the use of such information in the class in economics. Such a teacher will never lack for material.

Always should it be kept in mind that the pupils of the high school can be easily discouraged by the use of material which is entirely beyond their comprehension. The over-enthusiastic teacher can easily be unconscious of the immaturity of the mind of the high school pupil, or be too anxious to engage in the discussion of abstract theory or of the material in the text alone, when there ought to be discussion, simple indeed, but none the less valuable and important, of the economic life surrounding the pupils. It should be remembered that often the wisest use the simplest and most commonplace material. This is good judgment as well as good pedagogy. One need not be pedantic in order to be scholarly.

A great deal of related material can be secured from the study of American history. Some indication of how much is available can be understood by reading what is said under method in American history in this manual. Industrial histories of America and England will furnish a great amount of material, and much of it is illustrative. For example, England for a very long time held to the theory of no interference with manufactures, but finally undertook to regulate them. Just how far England has gone in this direction, and the United States also, is certainly illuminating. It can thus be seen how nations have gradually evolved the principle of regulation and control of production, distribution, etc. The **facts** in this matter should be easily accumulated to which none could take exception. No people surely can take exception when told in what direction they are developing. Whether they desire to continue in this direction is an entirely different matter. Relating economics to history should be of advantage to both.

Method — Mere accumulation of information is no longer encouraged in any school work, but it is doubtful if it is any more useless in any other subject than in economics. The very nature of the material and the aim seem to indicate clearly that mere information should not be the end. Scientific procedure is just as important in this subject as it is in the others in the curriculum. Reference to this kind of procedure under history in this manual will make clear what is meant. It is

quite evident that **observation** of phenomena, which in this subject means economic phenomena, and **thought**, directive and productive, dealing with what is observed, is in line with scientific procedure and must be present in any fruitful study of economics.

Suppose, for example, the topic rent is to be discussed. Now, it is an easy matter for the class to commit the definition of rent. One author gives the following definition: "Rent is the return on natural resources and, in economics, means the amount of wealth that land receives for its part in production." Would such a definition in and of itself be intelligible to the average high school pupil? Would it be even to the average adult? The thing needs to be clarified to be understood. This raises the question as to how it can be clarified. The good teacher naturally thinks of the word induction. Others less technical think of the term observation. For our purpose either term or both will answer.

It will be easy to begin to observe with the land immediately surrounding the school ground, having first permitted the pupils to select the **land** instead of the **houses**, in accordance with the definition, "Rent is the return on natural resources," etc. And a word should be said here concerning the use of technical terms. No argument ought to be necessary to prove that it is a waste of time to attempt to have pupils arrive by induction at their definitions. Rather should the term be understood first and then its application made clear by observation. So in this definition of rent we are not so much concerned with its definition by induction, but we are concerned very much with gaining an understanding of its application. Therefore starting with the land adjoining the school ground we have actual familiar concrete basis for an intelligent understanding.

Some discussion will reveal that, after all, rent exists independent of how it is paid or to whom it is paid. Thus far mere observation has been responsible for our discussion. But when it is seen that rent exists irrespective of how it is paid or to whom it is paid, then quite naturally arises the question given by one author, "How does rent arise and what reason is there for its payment?" Now comes real thinking combined with observation. There is a real problem to be solved and thought is absolutely essential to its solution. But thinking must have material with which to work, so it is necessary to get this material through

observation. But note two things: First, there is purpose in collecting this material; and, second, that the text serves merely as a guide in its collection. Thus is the rightful place of the text on economics indicated.

It is not necessary to follow the steps in solving this problem exactly as they occur. The teacher who uses scientific procedure will have no difficulty in the analysis of these steps and their orderly arrangement. The pupils will be willingly interested in collecting necessary data for the solution. But the teacher must always know **in advance** what things are necessary. Only thus can there be a valuable use of time and energy and real thoughtful development on the part of the pupils.

Incidentally such a solution will bring a great deal of satisfaction to the pupils when they begin to realize that the most common things, with which they have long been familiar in the economic activities of a community, are based on sound principles and develop in accordance with certain and very definite laws. Whether we have discovered just what those laws are may be an open question; but that **some** laws **do** exist is quite admitted. To adults who know full well that we live in an orderly world such a conception does not seem so important. But, if we could recall, it was a great moment when such a conception **first** came to us. Its value should not be minimized.

The illustration for rent answers well for all the other topics discussed in economics. In no community is there lack of material. This is a subject which concerns all people of whatever rank or type. This can easily be seen by the merest enumeration of the fundamental topics of economics: Production, distribution, consumption, exchange. Is there any community in which the people are not engaged in one or more of these activities? What a world of suggestion exists here for the teacher! It would seem that to fail to connect with community activities would be the result of wilful deliberation on the part of the teacher. The whole world has a **material** side. How can the teacher escape effect and discussion?

While it appears that the fundamental topics of economics are connected with real life, there may be some teachers who do not see that the same thing is true of the various smaller topics. Yet on examination it will be found true that the more into detail we go the more closely connected with life it appears to be. It will be a very easy matter therefore to find some good problems,

connected with daily community life, the solution of which will involve a discussion of many economic principles.

In practically every community there are persons who own stock in some organization either local or more remote. Before an individual purchases stock he must understand some of the terms and types of stock it is possible to purchase. He must know the difference between common and preferred stock. He will of necessity have purchased one or the other. If the teacher be diplomatic and judicious in the use of information, he will have no difficulty in finding one or more persons in his community who own common or preferred stock or both. Information of the existence of this kind of stock in the community at once raises the question, "Why do some people purchase preferred stock?" It is quite clear that this question can not be answered without a discussion of the organization of a corporation, its relation to production and distribution, the relation of a corporation to state and national government, etc., etc. The order of the arrangement and development of the topics necessary for answering this question will depend upon the teacher's judgment. But it is quite clear that the stock quotations in the daily paper will be a portion of the material used. Clippings can be made of any news items which seem to have a relation to the question, either directly or indirectly. Incidentally the mere collection of items from newspapers or magazines or elsewhere will be sure to develop the judgment of those doing the collecting. To be able to show that a particular article is of economic value is in itself no small thing. It is not every one who knows the difference between what is economic and what is something else.

Discussions in newspapers and magazines of the merits of proposed legislation, either state or national, will be found useful in the class in economics. It is a type of work which develops discrimination to have the pupils bring to class examples of false economic reasoning. Sometimes this false reasoning appears in advertisements. Pupils will enjoy searching for them. If, however, the teacher accepts these things without more than a superficial reason or no reason at all, on the part of the pupil bringing the example, no discrimination is developed and no good lessons in economics taught. Such acceptance on the part of the teacher is to be condemned in the severest terms. Pupils learn easily enough how to "put it over" on the teacher without any encouragement from him.

In discussing the topic markets there is ample opportunity to connect with the life of the community. Again here the discussion must be conducted on a common level so that the pupils may be able to understand. Sometimes there is a tendency for the teacher to use an affected vocabulary or a stilted and artificial style in economic discussions. Such a tendency will be sure to be observed and clearly understood by high school pupils and a lessening of respect for and confidence in the teacher will result. In the discussion of markets there is opportunity to talk in terms common to the understanding of the pupils. In all communities there exists the necessity to think in market terms. Exchange of one sort or another is continually being carried on, and high school pupils are familiar with this operation at least to some extent. At the market meet the producer and consumer, each looking at the product from his own standpoint. The producer is thinking of the weary days of hard toil and anxious waiting, of the expenditure of money and energy as well as of time, in order to secure his product. The consumer is thinking of the hours of labor necessary to earn the money which he is about to expend. Is there any wonder that the terms "value" and "price" arise in the minds of both? No use to be pedantic in the use of these terms; they arise naturally and can easily be explained by reference to the products in a community if it be largely a producing community, or, if it be predominantly a consuming community, to its activities by means of which money is secured so that purchase of products may be possible.

To be concrete wheat may be used as a commodity by which to illustrate value and price. Some simple problem might be raised, as "Why is the price of wheat $2.00 now when a few years ago it was only 80 cents?" This is a pertinent question and one equally interesting to consumer and producer. Without outlining the steps in the organization of the material to answer this question, it is obvious that discussion will involve the terms utility, marginal utility, value, price, supply, demand, etc. The part played by each of these factors relative to the price of wheat will become perfectly clear, and the pupils will have been given a vision of the importance of economic laws. It is far more satisfactory to know that the price of wheat does not depend entirely upon the whim of any one man or class of men. Soon will follow the generalization that the prices of all things are based upon far more stable, even if subtle, things than mere caprice. Then will come also the larger generalization and

vision that law and order are dominating factors in the seeming complex world.

Again let the teacher be reminded that such conceptions as of law and order, for example, are of great moment to high school pupils. Clearly such conceptions go far in fixing right ethical ideals in the business world. Only then can the consumer and producer recognize each as a brother instead of an enemy. Then, too, with the coming of this view of producer and consumer vanish antagonism, hostility, low and mean attempts at deceit, fraud in producing or purchasing or selling, and all those things in a false economic relation which appeal to the lower instincts of man and result in an inferior citizenship. And, too, it has been accomplished by the use of such common commodity as wheat! The home environment has contributed in wonderful measure to the establishment of a universal good! This is not sentimentality; it is sense.

From a discussion of price as illustrated above some sound conclusions can be drawn and some judgments made on monopolies or trusts. The necessity for a little more clear thinking on these organizations need not be proven; it is self-evident. The discussion can grow naturally out of the discussion of wheat. But again it should be said that a problem should be set so that observation and thought might be insured. The acquisition of facts alone **may** be useful in developing thought and in making applications, but the teacher has done his duty in this regard only when he has so conducted affairs as to **compel** thought and application. And in regard to monopolies there should be little difficulty. Such a topic is timely and pertinent and fruitful. If its presentation is proper and unprejudiced a double service will have been rendered, for the pupils will not only have gained an understanding of a very big factor in production and distribution, but also will have learned how to be cool, deliberate, fair, and impartial in their study of economic questions.

Reference

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COMMERCIAL GEOGRAPHY

Aim — The enumeration of several things to be gained in this study will serve to center efforts and produce better results.

1. Commercial geography should afford the pupil a survey of opportunities, both local and world-wide, for service. Vocational guidance is another name for this aim. Through this subject boys and girls should learn of the world's work; perhaps this may help each rightly to choose his part in it.

2. The study of the factors which determine the localization of industries and their relations to each other is rational thinking. To solve rationally even a few such problems in school will train the pupil to attack rationally such problems when he meets them in life.

3. To solve the problems of commercial geography intelligently many facts are needed. The data so organized should be valuable as equipment for making a living. (See under Method the problem of Paper Industry in the Miami Valley.)

4. To eliminate waste in the production, distribution, and consumption of goods is a problem which concerns every patriot. Commercial geography should help to break up this problem into simpler factors and to show how some of these may be controlled. The appreciation of this problem should awaken interests and activities which will bring pupils into better relations with their fellow men.

5. In the study of commercial geography pupils should gradually come to understand not only the relation of the earth to industry, but what is of even more importance, the relation between man and industry. Where this conception is clear and it is seen what vital relationship exists between man and industry, there will also be clearly seen the relation of man to man, and a consequential higher respect and kindlier feeling for each other will also result. The human interest in commercial geography should not be excluded in the intense desire to understand material industry.

Material — The study of commercial geography may be compared to the distractions of a spectator under the electric lights of a three-ring circus. There is much to see and plenty of forces

at work, but unless one is selective he becomes only bewildered and confused. To select from the complexity of phenomena those essential and not too difficult for a year and a half year of high school study of this subject demands great care. A study of the local regional control of industries by physical environment is properly the starting point. An appreciation of the differences in these controls in different regions, and the broader and more complex generalizations arising from this appreciation form the ultimate goal. Between lies a vast field from which selection must be made as the time limits for this study may permit. The teacher needs to be cautioned not to try to present all the essential facts; rather only to study the facts which will contribute to the understanding of those principles deemed essential. Local and seasonal interest may well exclude the novel and untimely.

As an illustration there are at least seven important cereal crops of the United States. The factors of control affecting the production of each of these seven crops are practically the same — climate, soil, fertility and renewal, man's ingenuity in handling and improving, facility of transportation and manufacture, food and subsidiary values. If these factors be considered in relation to the wheat crop, their application to the other six cereal crops may be very briefly made.

Again either a demand for wheat saving or the seasonal interest in wheat seeding, if this topic were taken up in September, might make the study of this crop more timely and therefore more important than that of corn, even if we do produce four bushels of corn to one of wheat. What the teacher needs to see is the possibility of excluding much that is simply information to gain time for the study of underlying principles; and the further possibility of finding close at hand and largely familiar to the pupil a body of information which lacks but the power of the rationalizing idea to make it truly educative. Commercial geography has for its field the study of all the factors which explain the geographic division of labor. It should be sharply limited from the field of general geography as well as from that of economics.

The sources of materials are numerous as in most social sciences. While a good text is the guide and basis for the work, it needs to be supplemented by much up-to-date and locally interesting material. Among the most valuable are the

daily commerce reports issued by the United States Department of Commerce; also many special reports published by the same source. Newspapers and magazines contribute much that is vital and interesting. Good reference works are essential. The Statistical Abstract of the United States published by the Bureau of Foreign and Domestic Commerce may be had free from your congressman. Maps are an essential part of the school room equipment and many of the best for this purpose may be had from the United States Government free or for a nominal sum. Collections of commercial products are valuable in proportion to the clearness with which they show one important thing. But the best material is the industry of the community itself. The teacher who fails to draw constantly upon this source wastes not only good material but also his best pedagogical leverage. (See, under Method, the problem of the sugar supply.)

The following outline of subject matter and proportion of time for each topic should be followed:

I. The principles of commercial geography, inductively treated by the study of a few staples of world-wide interest: Wheat, cotton, cattle, iron, coal. (Time, ¼.)

II. Geographical controls of industry in the United States: Plant products, animal industries, mineral industries, water resources. (Time, ¼.)

III. Geography of trade in the United States: Centers of industry and trade; trade highways; ports and transshipment points; resources and markets. (Time, ¼.)

IV. Geographic controls of industry and trade in foreign lands; study of important nations and their trade relations with the United States; study of world trade highways. (Time, ¼.)

There is plenty of material here for a unit course. If less than a unit is offered, no topic should be omitted but the time for each reduced. Thus if but half a unit is offered the time for teaching the principles of commercial geography inductively must be cut from nine weeks to 4½ weeks; so if the staple iron has been carefully studied, the study of coal as a staple may be much shortened.

Method — There is a point of contact with life easily discovered for each topic or principle studied in commercial geography.

Generally this point of contact will be found in the great events of the day; and this should be seized upon by the class and teacher as a basic interest for the work. As an example, in the study of sugar, instead of beginning with a historical sketch of sugar, let the class begin with the question of the future sugar supply.

Another basic interest may be supplied in many cases by the local industry; or lacking that, by the experience of those in the community who may have been concerned in the industry. To use the sugar industry again as an illustration, there may be a sorghum patch and even a mill in the community; lacking this there may be workers in the community who have had interesting experience in the sugar beet industry; if none of these are available, correspondence with those who live in a region where this industry flourishes will give much that cannot otherwise be gained toward accomplishing one aim: a realization of the desirability and opportunities of this industry. When followed to its logical conclusion through a careful study of the geographic controls of sugar production, the pupil should be measurably prepared to think rationally on a rational policy of subsidizing the beet sugar industry.

The motivation for a great amount of fact fixing will be found in the careful organization of any problem. And it should be constantly borne in mind that a fairly complete fund of facts is essential to correct reasoning. The following illustration may aid in making this statement clear:

Suppose the class interested in the high cost of iron and steel manufactures; the following activities of the class are likely to be found necessary before the problem is solved:

I. Preparation of map showing location of ore bodies. (Outline maps should be constantly at hand for such assignments.)

II. Estimates of world's total stock of ore.

III. Geographic interpretation of relative importance of ore regions.

IV. Map of steel and iron manufacturing regions. Interpretation.

V. Location of subsidiary minerals in this manufacture: limestone, coke, phosphorus, etc.

VI. Problems of transportation of ore.

VII. Markets for steel and comparative prices.

VIII. Significance of iron and steel to civilization.

All these various activities on the part of the class should give opportunity for fixing in a well organized and usable form a large body of geographic knowledge, which will supplement and partly supply the facts needed in the solution of very different problems.

Most of the problems of economic geography are very difficult. To be valuable the data must be recent and complete. Some factors are very apt to be overlooked and conditions unknown. A generation ago the German nation planned for the economic supremacy: but they failed to foresee, in solving their problem, the wonderful discoveries of great iron ore beds in Northern France, a discovery which probably precipitated the Great War.

The pupil of the secondary school must be trained to realize the difficulty of complete solutions for most of his problems in commercial geography. He and his teacher must guard against the overconfidence of superficial thinking; against the belief that the commercial geography class can in a half hour of discussion settle beyond question some great problem of industry or commerce.

Better take the attitude that most of these living questions are to be carefully thought about; that all the data obtainable that bears upon the question is to be carefully scrutinized and corrected; that the relations between this data and the solution are to be patiently sought; that the solution should be tested by every possible check; and that, finally, an open mind for new evidence or undiscovered data be constantly cultivated.

In the solutions of the problems the general method of all inductive reasoning must prevail.

I. Review principles already established and knowledge gained bearing upon the question.

II. Collect all the data bearing upon the problem.

III. Weigh the data, inferring from it the conclusion.

IV. State the solution obtained and carefully test it.

As an illustration: Suppose the class interested in the problem, Why has the Miami Valley become a great paper manufacturing region? Presuming that in the study of some other industry certain governing principles had been found, this would give rise to the first step.

I. Review: Importance of accessible raw material, cheap transportation and power, supply of supplementary materials, nearness to market, labor supply, etc., as determining factors for localizing industry.

II and III. Collect data: Each of the above needs to be considered and specifically studied in regard to the Miami Valley. As they are studied they should be weighed and an inference drawn as to which determine the localization of this industry.

IV. Comparison with some other great industry of the Miami Valley, as the metal working industry, may be used to test the solution. A second check might be found in a comparison with the New England region of paper making.

Several points need emphasizing in the above illustration:

1. The problem is a complex one. There may be historical or other data not easily discoverable. Hence the solution may be imperfect, even when carefully done. But if the student has been trained to be satisfied only when his data is as complete and up-to-date as possible, and has thought intelligently about his problem, two very important aims have been realized.

2. In the proper collection and weighing of data, the class, in the making of graphs, in the drawing of diagrams, and in many other ways will be organizing a body of facts. Aside from the valuable training thus involved, the facts themselves may be of value in the making of a living. For this great industry will doubtless recruit part of its workers from the schools of this section, and for some pupils the direct contribution for life work will have been made. For others the importance of the industry and the number of workers engaged in it, may be helpful in dependent fields of industry, as market gardening or the canning business or banking. For some members of the class the facts derived from this particular study may be of little direct value in making a living; but it should be remembered that a rich

equipment of information gleaned from many fields contributes much to success, as well as to interest in life.

3. One further emphasis: The class should gain something in this study valuable for vocational guidance. If so, some future day will not see them blindly following or repelling the attraction which this great industry by its very nearness must exert upon their lives. The personal experience of workers in the industry should certainly be available in such a study.

As a training for the solution of original problems of this sort the class may be asked to read carefully from the text or other reference the presentation of such a problem and hold themselves ready to present and defend the solution given.

Illustration: Will a man in the West or in the East be friendly to the forests?

I. Review location of forests and relation to lowland and areas and irrigation.

II. Data:
   - A. Havoc made by forest fires and reasons for same.
   - B. Wasteful lumbering.
   - C. Sheep pasturing.
   - D. Value of forest covered soil in preventing floods. Flood losses.
   - E. Risk to water power from forest destruction.

III. Weighing this data, the inference of the necessity of a permanent federal policy now is made plain.

IV. Conclusion: To save the forests, the duty of the nation. Check by experience of Europe.

(The above is condensation of this problem as discussed in Brigham's Geographical Influences in American History, pages 279-285.)

After some experience in work of this sort a more difficult example of the same type may be attempted. Let the assignment be a discussion of the question set up by Wm. E. Smythe in The Conquest of Arid America, Chapter IV, Part I: What are the blessings of aridity? In this single chapter the author enumerates these blessings:

A. It compels associative enterprise.

B. It is the cause of phenomenal soil fertility.

C. It compels the use of irrigation, which is itself a miracle.

To follow his development of these points properly at least one or more further assignments will be needed: For instance, A is elucidated in Chapter IX of Part II as well as in several other chapters which might be assigned in order that various pupils might each discover what the author means by A; and each by contributing what he gains from his reading may help the class get the complete idea.

Such procedure, besides affording training in problematic thinking, socializes the recitation, awakens an interest in the great national problem of conservation, and introduces the class to highly interesting supplementary reading.

In addition to the careful organization of all material into problem form, the successful teacher of commercial geography will not lose sight of the importance of the pupils getting the concrete phase as well as the relational.

Two suggestions with illustrations are offered:

I. Use every possible opportunity to have the pupil bring vivid word pictures to reenforce his statements.

Illustration: If the statement be given that the wheat market has been influenced by a cablegram in the London Times that locusts have appeared in Argentina (see Brigham's Commercial Geography, page 15), the teacher may ask one pupil to read the paragraph on this topic from Bryce's South America (pages 333-334).

II. Make abundant use of freehand map sketching and the charting graphically of geographic facts.

Illustration: If a contrast of the future trade resources of Great Britain and Germany be under discussion the charting of the percentage of the world's raw material controlled by each will be much more effective than any verbal statement of the fact.

The following problems have been used in the class room and will prove helpful:

Water Resources of the United States

(Chapter XI, Brigham's Commercial Geography)

Problem: Would it be a good thing to have the water resources under government control? If so, which shall be the unit of control, the county, state, or nation?

I. Uses of water.
   A. Water supply for towns and cities.
   B. Provides supply of ice.
   C. Affords means of navigation.
   D. Furnishes water power.
   E. Affords means of irrigation.

   Note — Bring out discussion of lakes, wells, rivers, etc., and **how** they receive their supply. (See last sentence in Section 148.)

II. Destructive effects of water.
   A. Occasions floods — refer to those of 1913.
   B. Causes swamps.

III. Government and conservation.
   A. Purpose of government.
      1. "Government activity should be limited to the protection of life and property."— Section 14, page 10, Guitteau's Government and Politics.
      2. See also Chapter XXI, "The Functions of Government," Forman's Advanced Civics.
      3. Chapter I, Boynton's School Civics.
      4. Preamble of the United States Constitution.
      5. Other references teacher may select.
   B. Activities of government in conservation of **natural** resources.
      1. Forests — Brigham, pages 142-143.
      2. Wild game — Brigham, page 149.
      3. Fish.
      4. Parks.
      5. Conservancy Commission of Miami Valley, with headquarters in Dayton. Building newly erected and donated by E. A. Deeds, Dayton, the president

of the commission. Purpose is to prevent floods in Miami Valley.

IV. Conclusion.

Transportation

(Chapter XIV, Brigham's Commercial Geography)

Section 185 indicates that transportation is fundamental to industry and commerce. The quotation from Macaulay shows that means of transportation have done the most for civilization. **Let us see how these things are true.**

It is likely that we shall understand these relations to commerce and industry if we understand a study of the **development** of these means. Our plan may thus be given as follows:

I. Development of
   A. Waterways.
      1. Early waterways.
         a. Rivers.
         b. Lakes.
         c. Canals — their history.
         d. Ocean.
      2. Later waterways.
         a. Rivers.
         b. Lakes.
         c. Canals — their history.
         d. Ocean.
      3. Things transported on water.
      4. Why those things were transported in this way.
      5. Improvements.
         a. Deepening of channels.
         b. Narrowing of channels.
            (1) Illustrated by jetties of lower Mississippi River planned by Captain Eads.
         c. Locks of canals.
            (1) Illustrated by Panama Canal.
         d. Contrast present-day type of steamer with those of an earlier day. Use pictures and de-

scriptions secured from advertising matter of steamship companies.

B. Roads.
   1. Early roads — their history.
   2. Later roads — their history.
   3. Things transported by these means.
   4. **Why** things **were** and **are** transported in this manner.
   5. Improvements in
      a. Construction — illustrations.
      b. Number — illustration.

C. Steam railways.
   1. History of, including
      a. Beginnings.
      b. Aid received — illustrations.
      c. Number.
      d. Necessity.
      e. Increase.
      f. Consolidation of lines — illustrations.
      g. Improvements — illustrations.

D. Electric railways — developed similar to C.

E. Express business — same as C.

F. Parcels post — same as C.

II. Why should there be any development of these means at all?

III. Conclusion.

It seems certain that the commercial relations of the United States with other nations will be increased many fold in the near future. A knowledge of a few principles of commercial geography will be invaluable to the men and women who are now the high school boys and girls. Not only for the sake of the financial gain which will accrue, but for the sake of friendly relations, and peaceful conditions which will also result, should an effort be made to understand foreign countries, industrially and commercially, and to realize in fact the possibilities, theirs and ours.

As an example it seems much worth while to know South America, as the people of the United States have never known

that country before. Again we must live as neighbors to Mexico whether we will or not, and selfish interests alone, if no others appeal to us, should prompt an expansion of our knowledge about that country. The schools must do this work if the future citizens are to understand better than the present.

Bigger and better things are awaiting the American people. Isolation of this country is a thing of the past, never again to be an influence in the formation of our policies; the teachers and students of commercial geography must awaken to their task.

References

J. Russel Smith — Commerce and Industry — Henry Holt.

Dodge & Kirchwey — The Teaching of Geography in the Elementary Schools — Rand.

Redway — The New Basis of Geography — Macmillan.

COMMERCIAL ARITHMETIC

Aim — The fact that in the grades is taught arithmetic and that in the high school commercial arithmetic is taught should serve to emphasize the necessity for making clear the distinction. To this end a statement of some of the things desired follows:

1. To develop skill, rapidity, and accuracy in arithmetic calculations.
2. To acquire a knowledge of short-cuts in arithmetic.
3. To become familiar with business methods in arithmetical calculations.
4. To understand commercial terms, commercial paper, commercial methods.
5. To gain a wider conception of business transactions.

In the work of the high school it is evident that the commercial aspect should receive very great attention. Here the age and previous training of the pupils in arithmetic will permit of this larger as well as the more intensive purpose to obtain. In any case the aim is not to review so much as it is to make some advance on the basis of what already has been taught.

Material — In the selection of material for this subject it should be remembered that usually half of the school year is devoted to its study. This demands therefore extreme care in selecting from such a wide field, with reference to the particular things sought in the aims indicated above. The following will serve as the proper type:

1. The adopted text.
2. Financial pages of newspapers and magazines.
3. Commercial and financial periodicals.
4. Material selected from some actual existing local business.
5. Visits to local business establishments to observe methods of handling business and problems naturally arising in the conduct of it.

Method — The teacher of commercial arithmetic should be thoroughly familiar with what has been said under method in arithmetic in the Manual and Course of Study for the Elementary Schools of Butler County, pages 63-67. This will insure a better connection with what has been done in the grades and in addition will enable the teacher to make a real advance on the business side of arithmetic as there discussed.

Much emphasis must be placed on drill work so far as rapidity and accuracy are concerned. In the arithmetical calculations the pupils should understand that there must be accuracy. It is not sufficient that the calculations are **nearly** correct. They must be correct. It is not sufficient that **nearly** enough postage is put on a parcel post package for the zone in which it is sent; business will accept only enough. A mistake in the amount of interest due on a government bond or on corporation stock may make all the difference between a correct and an incorrect balance in the bank book. All this must be accurately done and also rapidly. Teachers should insist on drill until it is absolutely accomplished.

But it is a mistake to think of the pupils as adding machines; they must be developed into good citizens with an understanding of business methods. They must know not only **how** to calculate fire insurance; they must know **what factors** enter into the fixing of **rates** of fire insurance. It is not enough to know how to figure premium on life insurance; the **theory** of life insurance must be understood. It is a good thing to know how to compute the necessary taxes for the payment of bonds for the school building out of the sinking fund; why there should be such a fund, and how it **operates**, must also be understood. All such knowledge makes better citizens. Drill has its **place in commercial** arithmetic, but so has discussion which tends to develop thinkers and producers.

The teacher's method must also be designed to familiarize the pupils with business language. They should know how to write contracts, notes, bills, etc., in commercial terms. They should understand the terms corporation, undivided profits, certificates of indebtedness, assets, liabilities, trust company, consignor, etc., etc. They must be able to think in terms of commercial relations and to express themselves so that commercial people may easily understand; they should do both these things naturally and automatically.

From what has been said above it ought to be clear that commercial arithmetic must not be content to discuss the same topics discussed in the grades; **some** may be, it is true, but even in that case the more complex side must be given attention. But there are many additional topics which demand discussion. Until they are used in the high school, it will be very difficult to explain the reason for commercial arithmetic in the high school.

BOOKKEEPING

Aim — Not always is it clear **why** bookkeeping is taught in school. It is more than a form of accounting and calculation as is evident from the following things to be kept in mind:

1. To give pupils a clear understanding of the principles of bookkeeping.
2. To familiarize pupils with some of the simplest and most practical methods of keeping their own accounts.
3. To encourage pupils in the development of habits of thrift.
4. To give pupils a conception of business as a vast social enterprise.

Every successful and enterprising business man employs some system of bookkeeping in order that he may know from time to time the financial condition of his business. He depends upon the system of accounting which he adopts for the information regarding the various sources of his income. Such information is essential to the wise and efficient management of his enterprise.

In our large manufacturing plants elaborate systems of costs have been introduced which make it possible to determine the exact cost of every operation upon a given product as well as the total cost of the product itself. Such knowledge is invaluable to those who are charged with the responsibility of administering our large manufacturing concerns. The sales manager will know better how to fix the selling price of an article, if he knows its cost of production. The business manager will know upon whom the responsibility rests for any inefficiency that may exist throughout the entire manufacturing plant. By comparing the yearly cost sheets of any given department he will determine whether it is becoming more or less efficient. The foremen in the various departments will use the cost sheets in arriving at just and reasonable piece work prices.

Thus we may readily see that systems of cost and accounting, elaborate though they may be, are introduced into our manufacturing plants as a safeguard against inefficiency and waste. The pupils should therefore understand that there is nothing artificial about bookkeeping, but that it is a necessity in the business world.

Perhaps there is nothing that will promote the development of habits of thrift and economy as will the keeping of an accurate record of one's receipts and expenditures. To this end pupils should be encouraged to use some simple practical method of keeping account of their own business transactions. The boy who keeps a systematic record of the cost of raising a pig in order that he may determine how much profit he makes is laying the foundation for a successful financial career no matter what his occupation or profession may be.

Although a great deal of mechanical routine is involved in bookkeeping, the teacher should never lose sight of the fact that it has educative and cultural value. The pupils in the bookkeeping department should gain a conception of business as a vast social enterprise. They should see the relation between the problems of business and the problems of citizenship and have an appreciation of the activities and achievements in the world of commerce. They should be made to feel that the countless thousands of men and women who are engaged in recording facts and preserving records are doing a very essential part of the world's work.

The pupils should understand that business desires not only **accountants** but **interpreters** of the accounts. The tables and figures should tell a story of success or failure of the business involved. Teachers should emphasize this phase.

It is essential, therefore, that it be so taught as to make it a thoroughly rational subject.

Material — The following sources of material will serve to make it possible to accomplish the aims indicated above:

1. The adopted text.
2. Books and magazines devoted to the activities and accomplishments in the world of commerce.
3. A well equipped bookkeeping department.
4. Common forms of commercial paper.
5. Commercial transactions by the individual, the home, or the school.

Method — When pupils take up the subject of bookkeeping for the first time, much attention must be given to mechanical routine

until they acquire the habit of executing their work neatly, accurately, and legibly. From the very beginning of the course, therefore, the teacher should accept no work which does not show steady improvement as regards the technique of bookkeeping. The pupils should learn to use intelligently and spell correctly the words commonly used in good business English. Practice in writing good business script should be continued until good results are secured. All papers showing errors or erasures should be rejected by the teacher. The pupils should be impressed with the fact that the value of a set of books depends upon legibility, accuracy, and the concise explanation with which every business transaction is recorded. Inasmuch as rapidity is not inconsistent with neatness and accuracy, the pupils should be encouraged to do all their work with dispatch. Standards of achievement may be used to advantage in the development of these abilities so essential in all good bookkeeping.

While the pupils are endeavoring to master the technique of bookkeeping it is not wise to attempt very much thought work. Early in the course, however, they should be led to understand the principle of debit and credit. The approach to this subject should be made as simple as possible by using transactions with which the pupils are thoroughly familiar. They will understand what it means to give value for value received. They will understand what it means to buy something and to sell something. Every one consciously or unconsciously credits what he gives and debits what he receives in every business transaction he makes. Herein lies the fundamental principle of all accounting.

There should be a clear understanding of what is meant by double and single entry, and the advantages of each. Why should business evolve one or both of these methods of accounting? Settling this question means a very thorough discussion of business philosophy which will be certain to result in an appreciation of both methods.

Then, too, there is necessity for the understanding of such terms as notes payable; notes receivable; interest accounts; expense and freight accounts. **Why** such things arise and **what** they mean will make clear **how** they are to be credited. Taught thus the subject becomes thoroughly rational.

No attempt should be made in the short time given to the subject to produce skilled bookkeepers. But a conception and vision of the importance of bookkeeping must be kept in mind;

keeping close to the aims indicated will suggest to the teacher how far to go into detail with each phase of the work. Most certainly the pupils must understand what a ledger is, but how much work shall be done in it in order to gain this understanding must be left to the judgment of the teacher. The same statement holds good with reference to the journal, cash book, sales book, etc.

Teachers should somehow so arrange the work and their method that pupils will see the importance and the desirability of some means of keeping account of even personal transactions. In this particular phase of the work teachers of bookkeeping should co-operate with the teacher of domestic science and economics in the preparation both of personal and family budgets.

Under no circumstances should pupils be permitted to complete the course in bookkeeping without an appreciation that farming is a business enterprise. It does not matter that all the pupils will not live on farms; Butler County is an agricultural county and it is almost too trite to say that true pedagogy insists on familiarity with environment.

Pupils should see that farming has the true elements of business. There is an investment, and a very large one; there are sales and purchases, many of them; there are receipts and expenditures, and in relation to many sources; there are profits and losses, numerous, large and small; there is the element of interest, which may be either a credit or debit; there must of necessity be either good or bad management. Some sort of means must be used therefore in determining what all these things are. In a word, pupils should see that farming is a real business investment and cannot escape all the rules which apply to investment. It is only begging the question to say that all farming is not conducted on such an accurate basis as other business; there still remains the question whether it **ought** not to be so conducted.

Certainly in this particular phase of bookkeeping the teacher will not fail to connect with the work in agriculture. Slighting this phase of the work will need to be justified by every teacher so doing.

It should be clear from the discussion of the subject that not **complexity** but **simplicity** should result, and that a better citizen is as important a product of such instruction as a better **accountant.**

MUSIC

Aim — Music is classed as one of the fine arts. This is extremely significant for the teacher in the public school. It suggests emphasis on skill, practice, etc., instead of on investigation, composition, etc. Not that it is expected pupils will be able to sing unless they know how to read, but that they shall learn to read **because** they desire to sing well. There exist the same fundamental factors in music as in painting and poetry. The teacher who ignores this similarity can hardly teach the best.

In order to be definite we must remember that the pupils must learn to do three things:

1. To manipulate the vocal cords.
2. To read notes in the selection.
3. To interpret the selection with appreciation and expression.

It is quite evident that these three things will have received attention in the grades, and therefore while the work in high school will seek to develop 1 and 2 even still more, such mechanical work will not occupy all or even the major portion of the time. The following things will receive emphasis as being legitimate results for which to strive:

1. A real joy and pleasure in singing.
2. Ability to sing with good expression.
3. Good taste and standards with reference to musical selections.

It will be noted that the pupils become the center of interest rather than the subject matter itself. The emphasis is on what they can **do** rather on what they **know.** They may read notes and know the composition thoroughly and talk intelligently about harmony; can they sing a selection with such appreciation and proper interpretation that the hearers feel the emotions and respond to the sentiment which the composer intended to embody in his selection? Are the hymns in church and other songs in other community gatherings rendered better because there is music in the homes, enjoyed and appreciated by the family because the teaching of music in the schools has

developed good taste which has functioned in the purchase of selections worth while? These are some of the questions which should be confronting teachers of music, and they should endeavor to have them answered in the right way.

Nothing has been said above concerning orchestral music and the development of ability along this line. For the most part that is an incident to teaching music in the schools, but nevertheless it is to be encouraged wherever there exist any possibilities. In such work of course there will be added aim, or shall we say the above aims find their application in a different field?

Material — The trained music teacher will have an almost inexhaustible source of supply, but it seems best to emphasize the following:

1. Songs that express love of country. It is fitting to review the patriotic songs that have presumably been taught in the grades. Other and more difficult material of this sort may be added. America the Beautiful, by Katherine Lee Bates, with music by W. C. MacFarlane, and the Soldier's Chorus from Gounod's Faust are typical compositions worthy of a place in the course. The great patriotic hymns of other lands will assume more importance with the expanding interests of the adolescent age. Kipling's Recessional and the Marseillaise have fuller meaning with the study of European history.

2. The folk songs of our own and of other lands. Foster's beautiful melodies of the South and a few of the typical negro songs of Paul Lawrence Dunbar shed a light on our national life obtainable from no other source, and are perhaps the only genuine folk songs that this country has so far produced. However, Thurlow Lieurance's reproductions of Indian melodies may be presented as violin or piano solos as a part of the work in musical appreciation. The greater part of the folk songs must come from the older countries of Europe.

3. Lyrical songs, both old and modern, which have worthy sentiments and music. These are so numerous that no selection need be used about which there is the least doubt as to its fitness or difficulty in presentation. The greatest mistake here is probably made in choosing songs that have sentiments either too childish or too mature for the boys and girls of this age.

4. Selections from operas and more pretentious music as far as the abilities of the class may permit. Frequently a portion of the music hour might profitably be devoted to the presentation of this material by piano, violin, or victrola, and of a grade higher than the class themselves are able to participate in, but not higher than they are able to listen to with real pleasure.

5. Such exercise in music reading and voice training as may be necessary to promote the ability to enjoy the material listed above. This is placed last because, while it generally must come first as preparation for the other material, still it is but preparation and the other types of material must be substituted for it as rapidly as possible. To put the greater part of any lesson upon these exercises is certainly a grave mistake.

Method — Music contains within itself all that ought to be needed for motivation. The difficulty seems to be for the teacher to estimate accurately which subjective motive to depend upon. The individuals of an ordinary secondary school class vary so widely in their appreciation of rhythm and harmony that it is difficult to standardize the work for a class. From some individuals who can hardly appreciate the very primitive pleasures of rhythm to those who react quickly to elaborate tonal combinations is a wide range. This would suggest the need of very careful study on the part of the teacher of this subject of the individual differences of his class. And because of the sensitiveness of the adolescent, the teacher should exercise great care in touching the individual differences. The following suggestions are offered:

1. A constant and cheerful optimism on the part of the teacher is perhaps the greatest help in this difficulty. This must be real and not feigned. It does little good to tell pupils to look pleasant if they do not feel so.

2. By beginning with the more confident pupils and asking for those efforts well within the range of each one called upon, it will be possible to build gradually self-confidence in each member of the class. This effort should be steady and not intermittent; a few minutes taken from each lesson for individual work, until it comes to be an established order.

3. Indifference to some faults as long as effort for improvement is strong may be necessary. The teacher who constantly halts the work to correct slight errors is in danger of destroying essential self-confidence.

4. Very frequently the teacher must turn from the subjective motives to which he must appeal in his individual work and depend upon the motive of social co-operation to carry the individual along with the class.

Because of the importance of social co-operation and the frequency with which it must be appealed to in the music recitation, the routine of the recitation becomes correspondingly important. Perhaps the greatest waste in the teaching of music comes from lack of attention here. It is a part of the work which needs to be carefully prepared before the recitation begins. It is too common to see a teacher spend a large part of the period upon some item of routine, such as the readjustment of the seating plan of the room, only to forget at the next period the previous instructions. The following suggestions may indicate possibilities of eliminating this waste:

1. The plan of seating should be carefully worked out and changed as little as possible. Much of the work should be given with the class standing.

2. Definite signals should be established and their order followed as uniformly as possible. Thus the class might be trained always to pursue the following order in starting to sing a selection, acting in unison from an initial signal from the teacher: Stand, listen to key note, sound key note, beat one measure with instructor, sing.

3. The work of the recitation should be divided under large heads or purposes so that the class may quickly make necessary adjustments and know what they are expected to do, when the teacher takes up one of these purposes. For illustration, it should be necessary to instruct a pupil but once what procedure is expected when practice in sight reading is called for.

Many similar suggestions will occur to the teacher whereby routine may eliminate waste.

It has been indicated above under the topic Material that a part of the time should be devoted to listening to good music.

The class should be as active here as in the exercises where they participate. They should be expected to reproduce by whistling, singing, or humming, parts of the themes and to come gradually to react to the emotional stimuli.

It ought not to seem debatable that there should be some attention given to the seasons of the year in planning the material to be presented in the school room. Certainly the mood and spirit and atmosphere which permeate the school room bear some vital and direct relation to the moods of nature. It is a wise teacher who can so adapt the work of the music class that there will be harmony and contentment instead of discord and dissatisfaction.

Then again some attention should be given to the dominant feeling of a community or state at the time the lesson in music is given. Does patriotism hold sway? Then is the time when the singing should be patriotic. Is there joy over the successful culmination of a community project? Has the school had some new honors added to it? Then the joyful should prevail. In a word, the teacher of music has an opportunity to adapt the instruction to the real environment. The teacher must be a keen interpreter of the times and responsive to the community and national feelings.

After all, these suggestions are only another way of saying there are just as good opportunities in music to be pedagogical as there are in other subjects. And, too, in the same measure as in other subjects must preparation, presentation, and the other steps of a good recitation be present in the music recitation. Here too must the pupils be taught to organize and evaluate; to be conscious of strong motives, and even through music to realize the value of a citizen who has initiative. Principles of teaching apply to music just as truly as in any other subject. The teacher of music will find better results for having applied those principles.

The following lesson plans are given as illustrations of possible ways of using good pedagogy in the teaching of music. They are intended to be suggestive and other organizations of the same material may be made by teachers. They will serve also to emphasize the **necessity** of planning for work in music.

Problem: To teach the song, The Two Grenadiers, by Schumann.

The following steps may be taken in the organization, being sure to draw from the class as many of them as possible:

I. Discussion of the song and its meaning.

II. Singing the song as a whole to gain interest in it as well as practice in sight reading.

III. Practice of more difficult phrases and intervals separately. Drill on the time and groups of triplets used in the song.

IV. Tracing the familiar strain from Le Marseillaise which is woven into the music.

V. Repeating the song as a whole for accuracy and expression until well read and learned.

That there should be some information and knowledge of the nature of the development of music should need no argument. In short there should be musical education as well as the singing of songs. Not that this should **displace** singing, but that it should supplement it. The teacher might take for the general problem such a one as: To discover how music history develops along similar lines with political history. Of course there would be required a series of lessons on this general problem. For one such lesson might be given the following:

Problem: Trace the beginnings of secular music from the Troubadours and Minnesingers, showing how music came to exist for all the people and how it was connected with all sides of their lives.

Before this can be satisfactorily solved it will be necessary to consider many things. There must be found how government gradually came from under the rule of the church, how folk music came to be, what was the influence of the secular singing contests among the common people, etc., etc., depending upon the amount of material accessible. After this has been found out or perhaps while it is being found out, there might well be played such records as Wagner's March from Tannhauser, Wagner's To the Evening Star, illustrations of an early folk music, especially of France, etc., etc.

As illustrating the **type** of music with which pupils should become familiar by the time high school has been completed, the following list is given:

1. Soldier's Chorus (Gounod)
2. Home to our Mountains (Verdi)
3. Welcome, Sweet Spring (Rubenstein)
4. Anvil Chorus (Verdi)
5. Oh, Italia, Beloved (Donizetti)
6. All Through the Night (Old Welsh)
7. Flow Gently, Sweet Afton
8. Santa Lucia (Italian Folk Song)
9. Drink to Me Only With Thine Eyes (Old English)
10. I Would That My Love (Mendelssohn)
11. Pilgrim's Chorus (Wagner)
12. But the Lord Is Mindful of His Own (Mendelssohn)
13. My Old Kentucky Home (Foster)
14. Home, Sweet Home (Bishop)
15. Father in Heaven (Largo) (Handel)
16. Hymn of Peace (Beethoven)
17. Sweet and Low (Barnby)
18. Star Spangled Banner
19. America
20. Love's Old Sweet Song (Molloy)

MANUAL TRAINING

Aim — Like most other subjects the aim in teaching manual training may well be subdivided.

I. Practical aims, which this subject is particularly adapted to reach:

1. Self-exploration or vocational training. For some boys manual training will prove a foundation for the vocation by which they will earn a living. For others it will provide an avocational interest, a field for the activity of leisure hours. It is well to recognize that this is an increasingly serious demand for which our schools must provide. The big recent movement to put a work bench in the home of every boy is an attempt to answer wisely a very marked need. All the boys who take manual training should find much experience and information in this field, which will help them in choosing vocations.

2. Skill of hand and eye, such as manual training develops, is an invaluable asset. A big part of the work of the world can be done well only by those thus trained. Even he whose share in the world's work lies in another field, will be often confronted with tasks and emergencies when skill of hand and eye will add much to his power to be useful. The handy man who can tinker broken articles, adjust sagging doors or silent doorbells and so on, not only saves time and money but also prevents much friction and inconvenience.

3. The personal feeling toward good form and construction evoked by an experience in producing articles thus characterized should be a practical aim of the manual training course. It is upon this personal feeling and appreciation that we must rely to improve the construction of our houses, the equipment of our homes, and the growth of industrial arts.

II. Educative aims common to many school subjects, considered in the phase strongly promoted through manual training:

1. Training in reflective thinking or the solutions of problems; particularly in that class of problems where both the data given and the desired solution are expressed in material objects rather than in words and in abstractions. Those to whom this

type of thinking comes more easily have been too much neglected in our schools. To organize the manual training work to meet this aim is one of the most pressing and difficult problems now confronting the educational world.

2. Development of the social consciousness should come from manual training. The knowledge of industrial needs and of the important part that scientific procedure plays in industry will foster this feeling. Responsibility for accurate work, particularly in some co-operative project, becomes almost self-evident in this subject. Respect for dexterity of action needs to be encouraged no less than respect for dexterity of thought.

3. Manual training, while inferior to play for this purpose, should be consciously used to promote good health. The vigorous muscular exercise it requires may be partly a corrective for the sedentary tendency of most school work. There is good authority for believing that it stimulates mental health even more than physical well being. This assumption is borne out by the teachings of anatomy, the history of the race, and by the experiments with mentally deficient children.

There are numerous community, home, and school projects which should be undertaken, not because the manual training class should necessarily do mere manual labor, but because such projects are highly educative. If the school yard needs grading or leveling, the manual training class **may** profitably do this work, but whether such work will prove profitable or not in an **educative** way must determine whether this class **should** do this work. It might be difficult to justify this work in the manual training class just as it might be difficult to do so if it should be undertaken by the English or geography class. The theory and aim of manual training must be constantly kept in mind. There should be a distinction between manual training and mere manual labor.

Material — Problems and projects involving the use of such tools and equipment as may be provided in our schools constitute the material for the manual training course. The sources of this material are largely two — the making and mending of simple articles of farm and home equipment; and projects involving the constructing of articles or even buildings for school or community use. To these should be added the larger field of social service sometimes available, as the making and mend-

ing of toys and other articles for the Red Cross or a charitable organization. The problems presented by these various needs will vary with the community and from time to time; but they are numerous enough to supply abundant material. The teacher's task is to train the boy to see these problems for himself, and to guide him in the selection of such as will provide exercise in regular turn of each activity indicated below as essential to the year's work.

Below is presented the outline for two years' work in manual training. This should probably be placed in the first and second years, but may be placed in other years of the high school course as determined by local conditions. Schools able to offer four years in manual training should devote the last two to special phases of vocational training appropriate to the particular community. It is not deemed essential to outline such work here.

Before outlining the special topics for each year, mention must be made of four general topics to be continuously developed during the two years:

1. The proper care and use of all tools used. No boy should be permitted to work with a tool until he has been carefully instructed in its use and proper handling. He should be taught to keep his desk in order, his pencil pointed, his edged tools sharp, and to replace general tools and supplies promptly. While it is recognized that considerable mechanical ability is necessary for so complex an operation as filing and setting a saw, or sharpening an augur bit, even these things, under instruction and guidance, should be attempted as he advances in skill.

2. The elements of design and mechanical drawing. No piece of work should be attempted until the design has been carefully considered and a working drawing prepared. Preliminary free-hand work is essential unless the pupil has had practice in free-hand drawing in previous grades. It is important also that some practice should be given in preparing blue prints from mechanical drawings before the first year's work is completed. Approximately one-fifth of the time given to manual training should be given to this topic of design and mechanical drawing.

3. A study of the material used, their sources of supply, and the processes of manufacture from raw material. This should include accurately drawn bills for the material and labor used in making each article.

4. Staining and finishing. These should always be considered with relation to the function of the article as well as to the material of which it is made.

Too much emphasis cannot be placed on the fact that teachers of manual training should clearly keep in mind certain **principles** which must be taught in each of the years. This is far more to be desired than the construction of any uniform list of articles. Each teacher must be free to construct such articles as seem best for his particular community, but such work will necessarily be in conformity with the fundamental things to be taught. The very nature of manual training and the theory underlying it make this procedure desirable. In other words, there can be a uniformity of principles and method of procedure, even while there is variety in the production. Consequently each teacher will be expected to justify the things made on the basis of the fitness to the locality and the desired principles involved in their construction. It will be an easy matter, therefore, to determine whether essentials are being accomplished.

Ninth Year

The year's work will consist of exercises with the ordinary tools used in bench work — plane, saws, try-square, chisel, gauge, scribing-knife, brace and bits, mallet, hammer, nail-set, countersink, hand-drill, sliding tee-bevel, and file; practice in using the proper finishing material for each article made, and the corresponding exercises in mechanical drawing. The amount which may be accomplished will vary somewhat, depending on the amount of manual training the class members received in the grades preceding. Accuracy in the following exercises should be secured: Measuring and lining; chiseling and gouging; sawing, planing; shaving and scraping; boring; construction of principal forms of joint for resisting compressional, tensional, and transverse stress; chamfering and beading; assembling.

Tenth Year

In this year's work, even more than in the ninth year, the entire class may co-operate on some project which when complete shall be of service to the school or community. The nature of this project will determine, to some extent, the topics developed. The equipment of the school and the problems arising in the

community, will also be determining factors. It is desirable to give exercise in materials other than wood. The following are suggested: Concrete construction; drawing out, welding, and bending of iron, and simple exercises in forging and blacksmithing; the construction and operation of the gasoline engine; soldering and tinkering; simple exercises in pipe-fitting and plumbing; the elements of electrical wiring; shoe and harness mending. The elements of cabinet making, more difficult problems in woodworking and joinery, the uses of the steel square and sliding rule, may be added as time permits or as other factors make it necessary to eliminate any of the preceding topics.

Some special thought should be given by the teacher to the subject of work in concrete construction. Even the most casual observation shows that cement work in its many forms is claiming a larger place in construction. Not to have even an understanding of the simplest elements of it is inexcusable on the part of the boys and of course the school must share its responsibility for this lack. Reflection on the theory underlying manual training should be the best argument for giving some immediate place and attention to this form of work. An enumeration of some practical projects will show the possibilities of this work:

1. Concrete foundation.
2. Bird baths.
3. Hotbed frame.
4. Small trough.
5. Rain barrel.
6. Fence posts.
7. Ice box.
8. Flower box.
9. Sidewalk tiles.
10. Duck pond.

Etc., etc.

Teachers should send to Association of American Portland Cement Manufacturers, 111 West Washington Street, Chicago, Ill., for the following pamphlets, all of which may be obtained free:

1. Manual Training Course in Concrete.
2. Concrete Fence Posts.

3. Portland Cement Stucco, Bulletin No. 22.
4. Concrete Silos, Bulletin No. 21.
5. Concrete in the Country, Bulletin No. 26.

With these suggestions the teacher ought to see the opportunities for possibilities for the home and school. The manual training class can easily be made a factor in school life as well as in home life. Often simple equipment and repair work can be undertaken with profit to both school and manual training class.

Method — Initiative **on the part of the pupil** will characterize good method in manual training. The selection of a problem in which he is interested and which will provide exercise in those topics next in order in the course, offers opportunity not only in initiative but also in judging of values. The pupil who takes little interest in the making of a calendar mount or ironing pad because no personal relations have been established between himself and these objects, may find that personal interest in some other piece of work involving the same exercise, say, the making of tent poles and pins. If he be permitted to select his problem within the limits of the topic to be developed, his work will certainly provide motive, initiative, and judgment of values, three characteristics of good method in any subject.

Again, the same problem of the tent pole provides excellent opportunity for the organization of **his thought** on the **part of the pupil:**

First, a problem clearly perceived. What shall be the materials, dimensions, and design of his pole to combine the necessary length and strength with the least weight?

Second, the collection of all data bearing upon this problem and the recall of previous experience which will help to solve it. What will be the height of the pole when set up? The probable weight of material and force of wind pressure to be provided against? What materials best combine lightness with strength to resist the kind of stress involved?

Third, an inference obtained by weighing the data. A design is drawn and the pole constructed.

Fourth, the solution is tested. There can be no ambiguity in the finished result. Either the tent pole will serve the pur-

pose well or it will not. Either the dimensions and lines correspond to those of the design or they do not.

Taught thus, manual training will provide training in rational thought similar in type and value to that offered in other subjects.

Manual training may readily become a typical socializing exercise. To make inclined planes for the class in physics, a sand table for the primary room, seed testers for the class in agriculture, or concrete flower pots for use throughout the school building may well be undertaken as a group assignment. Such assignments teach the pupils not only to work for others, but also to work with others. Co-operation and social service need to be coupled together in the school as in the world. If the inclined plane made for the physics class be not accurate and well adusted, the one who made it will hear the truth from the one who must use it. If four boys co-operate to make a drawer to a laboratory table no one dares be careless or the combined result will be spoiled.

The teacher of manual training should be watchful for opportunities by which the pupil may acquire knowledge of the social activities and needs of the industrial world. The practices of industry organized on a large scale may not all be transferred to the school work shop; but some of them should be. In the amount of conversation permitted in the class room, regulations of good work shops may be approximated. The time factor as a determinant in cost of production of articles in the manual training shop, should be carefully considered and compared with the same factor under shop organization. By attention to this aim the teacher may help the pupil to a realization of the world of industrial productivity too often far separated from the school life. Such a realization should contribute very directly to the self-exploration so desirable for the youth's vocational guidance. To enlarge this realization, excursions to some of the larger shops of the vicinity should be an established part of the manual training course. These shop excursions need the same careful planning that science excursions must have. The teacher is referred to the discussion of these excursions found elsewhere in this manual.

It should not be difficult to relate all the manual training work to life's needs. In the first place it certainly will do something

to provide the skill of hand and eye which is one of the ever-growing demands of civilization. Respect for such skill comes to the boy who acquires some portion of it by laborious effort. If the teacher accepts inaccurate and poorly finished work one of the greatest values of the work will be lost. The teacher should also guard against the tendency to plan for the logical development of his subject without regard for the individual or community demand. The making of a wheelbarrow which is needed for actual use by the individual or school is worth more than the construction of any other article not needed which might involve the same constructive training. In a rural community emphasis may well be placed upon the type of rugged outside work for which the demand is most apparent. The equipment of rural schoolhouses and playgrounds may be greatly improved by an energetic manual training class working under a skilful teacher. Some very encouraging beginnings have been made, but this field is still practically untouched.

Drill has its place in this subject, as in any other, for securing skill. But repetition alone must not be trusted to produce efficiency. The type of workman who has relied upon repetition to produce skill is one of the most pitiful and one of the most common products of industry. Analysis must combine with effort for improvement to produce adjustment properly.

Satisfactory correlation of manual training with arithmetic is more common perhaps than with any other school subject. The amount of work that may be done in measurement, computation, and fractions should strongly re-enforce the arithmetic teaching. In general, however, this is more often simple relation of work than genuine correlation. Some of the best correlation of manual training has been done with the subject of English. A demonstration in manual training may provide an exercise in English suitable for even so pretentious an occasion as commencement.

To encourage the development of individuality, it is desirable that the pupil be allowed considerable freedom of choice as to design and that as wide a range of problems be accepted as may be included within the limits indicated for the course. If one boy in the class chooses to make a beehive while another makes a poultry coop, they may both equally contribute to the class discussions of joints involved or materials and finish to be used.

References

Vocational Training, Snedden, Weeks and Cubberly, published by Houghton, Mifflin & Company, is a discussion of the history and philosophy of this subject.

Correlated Courses in Woodwork and Mechanical Drawing, Griffith, published by Manual Arts Press, is an excellent guide in regard to equipment, organization, and classification. It contains some good lesson plans and is quite suggestive as to the correlation of grade and high school work.

Farm Shop Work, Brace & Mayne, published by the American Book Company, contains many suggestions of practical problems for rural communities.

Bench Work, Goss, published by Ginn & Company, is a valuable yet simple treatise on the practical aspects of the work. It also contains a carefully planned series of lessons.

Handy Farm Devices and How to Make Them, Cobleigh, published by Orange Judd, is quite suggestive and practical.

Popular Mechanics, Scientific American, and similar magazines are invaluable in contributing interest.

Every teacher of manual training should have in his possession, before he assumes to begin the work, these two government pamphlets:

1. Some Exercises in Farm Handicraft for Rural Schools, in United States Department of Agriculture Bulletin No. 527.

2. Farm and Home Mechanics may be secured for fifteen cents from the Superintendent of Documents, Government Printing Office, Washington, D. C. This pamphlet might also be obtained free from Southern Pine Association, New Orleans, La.

These two pamphlets are invaluable to the teacher of manual training. Both of them contain lists of practical things which should be made. They also have full discussions and descriptions of the things to be made, and the drawings and illustrations are complete.

More than any other must the teacher of manual training depend upon local environment and conditions for his work in the class. By the very nature of the subject matter, any list of articles to be constructed by the pupils in one school or locality

might not be appropriate in the least for another locality. Hence the teacher must keep in mind the principles which every school should develop and construct such articles appropriate to his community and involving these principles. He therefore must be equipped with a good reference library containing not only books but most certainly such pamphlets as are indicated above.

HOUSEHOLD ARTS

Aim — Household arts has a broad content. It is sometimes referred to as domestic science. The first is inclusive of the latter and is therefore much better. The term household arts is broad enough to include all the arts and all the sciences which center about home-making. In other words, the girls are to receive training in the running of a household on scientific and artistic principles.

It should be firmly established from the beginning that this subject is to receive an equal rating, as to its educational value, along with the other subjects in the curriculum. There was a time when the training which household arts gives was received in the home. The extent to which this is being done at the present time is so small that the school has been called upon by society to offer such instruction.

In taking over this work of training girls for household duties a very clear understanding must be had that there is still a very close relation with the home life of the pupil. Respect for the mother's way of doing things is a factor not to be ignored. It will be the task of the household arts teacher so to conduct her work that the mother will not only not oppose her instruction, but will co-operate and even profit directly by the adoption of some of her daughter's methods. This is no easy task for the teacher, but her success will be measured accordingly.

Certainly there can be no other subject more closely related to the present and future life of the high school and upper grade girl than that which centers about the home. The home is an institution which must not die. Girls must be led to see that no difference what they expect to do later in life, it is very important that they receive some training in the duties of home. The coming generation of mothers must develop into truly good citizens.

In order to realize the above it perhaps would be advisable to consider more approximate aims in the study of household arts. The following are some of these aims that may be set forth:

1. An insight into the possibilities of economy in living.

2. The securing of modern and efficient methods in the preparation of materials used as food, clothing, and shelter.
3. Training in the principles of hygiene and sanitation as they apply to the home.
4. Realization of the purchasing power of the individual purse.
5. A help in the solution of the problem of domestic service.
6. Efficient methods in the care and feeding of infants and the sick.
7. The purchasing, planning, preparing, and serving of a meal.
8. The ability to use art in its relation to design and color in interior decorations and in dress.
9. The ability to make out budgets, keep simple household accounts, etc.
10. The ability and interest to plan economically one's own wardrobe.
11. Skill in judgment in the selection of a well made article.
12. The inclination and skill to do plain sewing.
13. Some training along the line of home entertainment.
14. Some well grounded ideas as to what can be done in leisure time.
15. Training in the general management of a household and skill in the technique which is found there.
16. A viewpoint as to the place which woman occupies in the community at large.
17. A study of the industries, and methods of work, in the sphere of woman in order that she may have an appreciation of the dignity of labor.
18. The desire to counteract the disintegrating influence upon the home and some notion of how to accomplish this.
19. A knowledge of the principles of right living and the creation of a desire to employ them in order that one can develop into an individual who is happy and efficient.
20. Creation of a love for home and the desire to fulfill its duties scientifically and artistically.

Material — It is not the intention of this manual to indicate definitely what articles should be made in sewing and in cooking.

This would not only work a hardship upon some schools, but would bring about conditions unsound from the pedagogical standpoint. Rather is it the intention to standardize the work by asking that certain general topics be treated during the first year's work and then more advanced topics for the years that follow.

In one respect, intensity, the problem of a teacher in a school during three or four years of work in household arts will differ from the one where the teacher gives only one period per week to the work. This means that the topics listed below can be utilized in all schools. This does not mean that every school will treat every topic every year. Time will not permit this in some schools. But it does mean that any school can do some of the work, adapting it to their individual needs. It should also be noted that whether much or little time is given to the course, thoroughness is expected.

Teachers will note that provision has been made in the aims for a large amount of work. A full development of the content leading to the realization of each aim would no doubt be sufficient work to cover four years of time. A general list of sources for material is given which will serve to indicate to the teacher something more of the general viewpoint which the work should embody:

1. Adopted text, if there be one.
2. Carefully selected books in the library.
3. Magazine articles.
4. Articles from newspapers.
5. Government bulletins and other similar articles.
6. Trips to appropriate places.
7. Lectures especially appropriate to girls.
8. Material from the homes of the girls.
9. Problems brought from home to be completed at school.
10. Co-operative work. Donation of services in various lines.
11. Exhibitions and demonstrations.

It is a comparatively easy matter to cite sources of material. It is quite another matter to use this material so as to develop the girls at the same time. A discussion of this phase will come

under method. It remains to set forth those things which will make the course uniform throughout the county and at the same time allow sufficient latitude for individual school differences. The type of work to be given in the first year is given special emphasis. Those schools which give more than one year of work will find ample amount of work suggested. In general it can be said that during the first year the mastery of tools is fundamental. More advanced work has to do with the development of skill. Therefore the following things are listed as desirable accomplishments in the work in household arts:

Sewing

Work of first year:

1. Stitches.

   Basting, running, back-stitching, over-hand, overcast, hemming, button-hole, blanket, catch, feather, outline. satin, cross, ball, chain.

2. Seams.

   Common or plain, French, felled, etc.

3. Repairing.

   Darning, patching.

4. Machine.

   Study and practice in use of.

5. Patterns, including cutting.

   Study and practice in use of.

6. Simple laundering, simple cleaning.

7. Study of the care and use of tools used in sewing.

8. Textile study.

   Sources and properties of materials. manufacture, etc.

9. Hygiene as applied to clothing.

10. Buying.

    Ethics of shopping, economy, suitability, tastes, budgets.

11. Accounts.

Advanced work:

1. Proper continuation of work of first year, developing skill in the same.
2. Making of more complex articles involving the processes used in first year and others if needed.
3. Crocheting.
4. Knitting.
5. Embroidery work.
6. Millinery.
7. Designing.
8. Drafting.
9. Stenciling and weaving.
10. Art as applied in the home.

It was suggested that it is not desirable to have the same **projects** in every school; that should be determined by the environment of the community. But it is desirable that the same **principle** be taught in every school. The following is indicative of what those principles are and some types of projects are given in which those principles are involved. If other specific projects are found desirable, they may easily be carried out.

I. Hand sewing.

1. Stitches: Basting, running, gathering, overhanding, overcasting, hemming, backstitching, buttonhole, and slipstitching.

   A. Application: Bags, underclothing, dresses, shirtwaists, middies and skirts, napkins, aprons.

2. Decorative stitches: Featherstitch, chain outline stitch, cross-stitch, herringbone, hemstitch, and satin stitch.

   A. Application: Bags, underclothing, dresses, guest towels, table scarfs, curtains, etc.

3. Seams: Plain, felled, French, placket, and band.

   A. Application: Bags, underclothing, dresses, shirtwaists, skirts, middies, and towels.

II. Machine sewing.

1. The use, care, and running.

A. Application: Underclothing, dresses, middies, skirts, shirtwaists, lingerie waists, kimonos, aprons, pillow cases, and baby slips.

III. Garment making.

1. Machine and hand sewing.

A. Application: Drawers, petticoats, nightgowns, combination suits, corset covers, princess slips, dresses, shirtwaists, lingerie waists, middies, skirts, prevailing blouses.

2. Commercial patterns: fitting and adapting.

IV. Crocheting, knitting, and tatting.

A. Application: Caps, sweaters, jackets, lace, slippers, bootees, and doilies.

V. Embroidery and decorative work.

A. Application: Table scarfs, tray covers, pillow tops, pillow cases, collars, kerchiefs, towels, and belts.

VI. Repairing, darning, and patching.

A. Application: Cotton garments, woolen garments, table linen, knit underwear, and stockings.

VII. Textile suggestions.

A. Application: Comparing fibers and fabrics, dyeing, designing, weaving, choice, cost, and service.

VIII. Millinery.

A. Application: Making a wire frame, making a buckram frame, covering frames with velvet, silk, lawn, or lace, trimming, making bows, curling feathers, and renovating materials.

IX. Care of Clothing.

A. Application: Hanging, cleaning, removing stains, and pressing.

X. Co-operative work.

A. Application: School banner, costumes for school plays, and curtains for book shelves or windows.

XI. Home management.

A. Application: Decorations, furnishings, care of rooms, heating, lighting and ventilating, and budgets.

Cooking

Because of the very nature of the work it is difficult to indicate exactly what should be covered during the first year. The time element will dictate to the teacher the extent to which she can expand upon each topic treated. The more specialized topics can easily be omitted from the course.

I. Kitchen.

1. Selection, arrangement, care of, equipment, etc.

II. Cleanliness of person, kitchen, clothing, home, etc.

1. Germ life; disinfectants — artificial and natural.
2. Moulds.
3. Removal of dirt.
   a. Visible and invisible.
   b. Sweeping: Object, methods, care of sweeping utensils.
   c. Dusting: Object, methods, care of dust cloths.
   d. Washing of dishes.
   e. Scrubbing of tables, etc., and cleaning of refrigerators, etc.
   f. Cleaning of stoves.

III. Foods.

1. Rules for measuring and combining food materials.
2. Definition, function, descriptions, etc.
3. Digestion.
4. Classification: Thorough study and application.

5. Cost.
6. Nutritive value.

IV. Relation of the three essentials of life: Air, water, food.

V. Heat.
   1. Its effect on food materials.
   2. Methods of applying.
      a. Boiling.
      b. Broiling.
      c. Pan-broiling.
      d. Stewing.
      e. Steaming.
      f. Baking.
      g. Roasting.
      h. Frying.
      i. Sauteing.
      j. Braising.
      k. Fricasseeing.

VI. Lessons in practical cooking.
   1. Fruits.
   2. Cereals.
   3. Vegetables.
   4. Meats.
   5. Soups.
   6. Canning.
   7. Preserving.
   8. Salads.
   9. Breads.
   10. Cakes.
   11. Pies.
   12. Puddings.
   13. Frozen dishes.

Method — In planning the course in household arts the following problem has been kept in mind: What should a Butler County girl know about home-making? It is important that teachers of this subject also keep this problem in mind.

If this work is to take a place of equal educative value along with other subjects in the high school curriculum, sound principles of teaching must be employed. A just criticism of the past is that the work has been of the mechanical laboratory type, minus the thought side. Habits of work and ideals can be built up by means of household arts as well as by the other more conventional subjects. Certainly no other subject offers better and richer opportunities for problem solving than this subject which comes so close to the present and future life of the girls.

Teachers must clearly see the distinction between work which serves as a **means** and that which serves as an **end** in itself. For example, stitches could be presented as an end in themselves. In other words, the girls could make stitches just to know how to make them. It would be better to get the pupils interested in making some article. Then stitches become a means to an end.

It is possible and commendable for the teacher to work out several of the aims, as stated in the beginning, by means of one main problem. The following illustrates this point:

What can a girl of my age do in household arts in order to help my family and myself keep healthy and happy?

I. What can I sew for myself in order to help with the family sewing? (Make a bungalow apron.) Immediate problem: What must I know in order to plan, buy, and make this apron?

   1. Planning the apron.

      a. What material?

         Suitability as to kind of material, economy, and ability of class to use it.

      b. How much material?

         Style, pattern — interpretation of pattern.

c. Shopping.

Why have a plan?

How to shop.

Why not buy a ready-made apron?

d. Making the apron.

Cutting out.

Pattern and its use.

Lesson on use of sewing-machine.

Making, basting, stitching, etc.

e. Cotton manufacture and production.

Weaving, and design in cotton.

Textiles: Prices, width, etc.

Characteristics of gingham, chambray, percale, calico.

II. What can I learn to cook in order to help with the cooking at home? (Bake bread.) Immediate problem: Shall we make or buy our bread? Why?

(To be treated as above.)

III. How shall I help keep down expenses?

(To be treated as above.)

IV. How can I help keep things sanitary at home?

(To be treated as above.)

If reference is made to the aims of household arts as set forth in the beginning it can be seen that many of them are involved in the lesson plan just given. If the above is carried out in any satisfactory manner at all the thought side of the work cannot be slighted.

It is strongly urged that teachers present their work in problem form. Otherwise the work is very apt to revert back to mere manual labor on the part of the pupils. In order to do this it will always be necessary for the teacher to plan her lessons. Carefully prepared lessons on the part of the teacher will benefit the pupils in the following ways:

1. Increase economy of effort.
2. Create wider interests in industrial questions.
3. Give clearer ideas of construction.
4. Keep the work within the ability of the pupils.
5. Consider the home environment.
6. Cause the work to be better organized.
7. Enable the teacher to get her material ready.
8. Develop the pupils.

The following is given as a lesson plan which embodies good educational development of the pupils:

I. Lesson subject: Hemming a tea-towel with a French hem.

II. Grade: First year high school.

III. Ability: Class already know fairly well such stitches as running, hemming, and overhanding stitches.

IV. Environment: Rural and village communities.

Previous Lesson Preparation

1. Probable questions:

   What color shall we use? May we use other colors? Would we boil them in laundering?

   Why do we launder tea-towels often? Is there any other reason for boiling tea-towels than to keep them white?

   Do soiled tea-towels contain germs?

   Must tea-towels be well made to stand frequent laundering?

   Why do we object to ragged edges? Does the towel last as long with frayed edges as the one that is hemmed?

   What hem will stand frequent laundering?

2. Materials: White linen crash or soft white cotton toweling, one yard in length; white cotton thread No. 80, and a needle No. 9.

3. Tools: All necessary for sewing.

V. The Teacher's own aims.

1. The making of a neat tea-towel with a French hem.
2. Finding the reason a well finished tea-towel is better than one with weak hems.
3. Selecting the best material for the purpose.
4. Emphasizing the danger to health in soiled tea-towels.
5. Teaching the way to keep tea-towels clean.
6. Giving disciplinary training in
   a. Careful listening.
   b. Ready replies.
   c. Accurate thinking.
   d. Neat work.
   e. Action indicating executive ability.
   f. Economy of time.
   g. Increasing satisfaction at well done work.

VI. Preparing the class.

Questions similar to the questions in the preparation in the previous class.

VII. The statement of the aim.

To make a neat tea-towel with a French hem.

VIII. The lesson.

The selection: What material have each of you for your tea-towel? Why? (Take note of each decision — if by girl or her mother.)

The cutting: Why one yard in length? How can we be sure the edges are straight where the towel is cut?

Accurate folding: How shall we fold in the raw edges? Why use a narrow hem rather than a deep one? Why baste the hem? Why fold the hem back the width of itself to the right side?

Stitches used: How make the overhanding stitch? How conceal the end of the thread? Why use the overhanding stitch in tea-towels?

IX. The sewing.

The teacher answers questions or walks about the class noting difficulties or giving advice.

X. The closing of the lesson.

How many have completed the towel?

How many feel that their work is strong and good?

What material would **you** like to buy for more tea-towels at home? Why?

Will the material you want wear better? Will it cost more? Will it absorb water more quickly?

Will it launder as well?

Let each one lay her work on her desk and walk quietly about looking at each tea-towel, and compare its work with yours.

Questions on results.

Careful putting away of work.

Sound pedagogy demands that the pupils must share in the finding and solution of all problems before the class. This does not mean, however, that the teacher should not have many possible problems in mind. The following are given as types. They are not to be taken and bodily put into use. Rather are they suggestive. Neither is the list in any particular exhaustive:

I. What are the main problems which will confront a family in this community? (Family to consist of father and mother, and three children, John aged 13, Mary aged 8, and Alice aged 2. Income, $1,200.) Select some from your list and solve in class. The following are possibilities:

a. Where shall we live?

b. What shall be our budget?

c. What kind of food do the various members of the family need?

Etc., etc.

1. What are our responsibilities outside of home?

2. What are some secrets in buying that will help save money?
3. What shall I know about lunch boxes in order to prepare them economically and satisfactorily?
4. In what ways do my clothes reflect my character?
5. How can I keep down expenses?
6. What should I learn in order to help keep my clothes in repair?
7. What makes a good, attractive, wholesome, and inexpensive breakfast? How prepare it?
8. How shall we use left-over vegetables?
9. What can we make for Thanksgiving baskets?

One of the most important ends to be accomplished in this work is the acquirement of skill. This cannot be done in a short time. Teachers therefore must not sacrifice the development of the pupils to the demand for neat and accurate work. The latter is important but will come as a result. Neat adjustments and fine co-ordinations are matters to be watched, that they do not injure rather than develop the pupils. It would be well for the teacher to remember that this work is automatic with her while with the pupils it is a matter of practice.

In general teachers should see that their constructive work stands for ideas of large social meaning. They must be things that the pupils feel worthy of their best efforts. To say that the articles made should be the pupils' own expressions of the subject under discussion, is another way of saying that the work should be motivated. In this connection it can be said that care should be taken that work is not begun which is of such degree of difficulty that pupils demand too much help and thereby become totally concerned with the mechanical side.

Certainly many habits will be formed in the kitchen and in the sewing room. These habits no doubt will continue on through life. It is therefore important that attention be given to this matter from the start. Many things are concerned here, as for example, cleanliness, neatness, rapidity, economical and skillful ways of manipulating tools, etc.

The pedagogical step of application in household arts should be an easy matter. Girls should be encouraged to carry out their

plans at home. Unless this is done the real aim of the work is not realized, namely, to make the work of the home scientific. Girls should be led to appreciate their homes. It should be held up before them as a place fine and glorious. To do this, it is often best to begin away from their own homes by setting up ideals, tastes, interests, etc., and then coming back to their own homes.

In this connection the following illustrates how home material can be used: Suppose that the school does not own an electric iron. Have some pupil to bring one from home and have its use demonstrated. Its advantages can be discussed. Its construction and cost can be noted. In fact everything necessary can be done with this electric iron without its being owned by the school. Teachers do not make enough use of material which can be borrowed from the homes. Neither do they plan for those things which can be done in the home laboratory, the kitchen, just as well as in the laboratory at school. It is quite probable that more expensive and, in some instances, better equipment may be found in the homes than it is advisable for the school to possess. The teacher who forgets that there are laboratories in the homes is failing to use all the opportunities for practical and efficient instruction.

Work can often be motivated by appealing to the seasonal and holiday interests of the children. Many things could be learned in the preparation of a Thanksgiving basket; preparing for a Christmas party; things to make to wear next spring; etc.

Mention has been made elsewhere in this manual that certain subjects, as for example, English, can well correlate with the work in household arts. The household arts teacher should ever be ready to welcome such co-operation. It is only when both teachers concerned see the problem of correlation from the same and proper viewpoint that educational value to the pupils results. The following examples illustrate how household arts reaches out into other fields:

1. Study of sewing machine — physics.
2. Study of industries — commercial geography.
3. Sanitation — physiology.
4. Cleaning and dyeing — chemistry.

5. Prices of goods — economics.
6. Source and manufacture of materials — geography.

Emphasis should be placed upon the importance of good method in household arts. Its lack should strongly condemn the teacher. Its presence in the work should be a mark of merit and will insure a true and proportionate value of household arts in the curriculum.

Reference

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